"Primary Abstract","Primary Paper","Secondary Abstract","Secondary Paper","Duplicate","Have PDF","Year","Author","Title","Journal","Issue","Id","DuplicateOf","Abstract","Primary Comment","Secondary Comment","Source","pmid","pub_date","pub_affiliation","pub_authorlang","pub_journal","pub_journalshort","pub_place","pub_type","pub_issn"
"Unknown","Unknown","Unknown","Unknown","","","2011","Adding, C., Nilsson, A., Carlsson, S., Wiklund, P., Nyberg, T., Steineck, G.","","","108(19):1053-1057","4115ebee-089d-4793-af91-308f530ef0f2","","","","","RefMan","","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2012","Adding, C., Nilsson, A., Hosseini, A., Carlsson, S., Endler, L. H., Wiklund, P.","","","109(8):407-411","63d58242-6b91-4daf-a5f1-eabece6b2807","","","","","RefMan","","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2006","Larzon, T., Friberg, Ã-, Lund, P., Eliasson, K., Ã…gren, G., Arbeus, M.","","","103(30-31):2220-2222","98580c60-8d56-40ec-a4fc-04d8b174c472","","We report a successful one-stage operation using hypothermic extracorporeal circulation of an intracardiac leiomyomatosis in a 54-year-old woman where the tumor extended along the inferior vena cava with further extension into the right atrium. The patient had clinical signs of hepatic vein obstruction. A one-stage operative strategy increases the possibility for hemodynamic control. Complete removal of the tumor is advisable but in this case a portion of the tumor was left in the internal iliac vein because of fibrosis after previous surgery. 6-month postoperatively the patient had recovered well and CT showed no signs of tumor mass. Long-term follow-up was scheduled in order to detect recurrence. Intravenous leiomyomatosis is developed from smooth muscle cells in the uterine and extrauterine venous system. The tumor may extend along the inferior vena cava and eventually reach the right atrium and the pulmonary artery leading to intracardiac leiomyomatosis. It has a silent and slow-growing characteristic and often not until it has reached a significant intra-cardiac size it produces symptoms of venous obstruction and right sided heart failure, eventually leading to death. Accurate preoperative delineation of tumor extension is essential for successful removal of the tumor, where a multidisciplinary surgical team is mandatory.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2012","RÃ¸der, M. A., Iversen, P.","","","174(50):3160-3161","64ad0f3d-3620-4b4e-a9cb-2409384a82eb","","","","","RefMan","","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2007","Li, H., Schopfer, L. M., Nachon, F., Froment, M. T., Masson, P., Lockridge, O.","Aging pathways for organophosphate-inhibited human butyrylcholinesterase, including novel pathways for isomalathion, resolved by mass spectrometry","Toxicological sciences : an official journal of the Society of Toxicology","100(1):136-45","99a856a3-c75c-4726-8513-7e3f8968652e","","Some organophosphorus compounds are toxic because they inhibit acetylcholinesterase (AChE) by phosphylation of the active site serine, forming a stable conjugate: Ser-O-P(O)-(Y)-(XR) (where X can be O, N, or S and Y can be methyl, OR, or SR). The inhibited enzyme can undergo an aging process, during which the X-R moiety is dealkylated by breaking either the P-X or the X-R bond depending on the specific compound, leading to a nonreactivatable enzyme. Aging mechanisms have been studied primarily using AChE.

However, some recent studies have indicated that organophosphate-inhibited butyrylcholinesterase (BChE) may age through an alternative pathway. Our work utilized matrix-assisted laser desorption/ionization-time-of-flight mass spectrometry to study the aging mechanism of human BChE inhibited by dichlorvos, echothiophate, diisopropylfluorophosphate (DFP), isomalathion, soman, sarin, cyclohexyl sarin, VX, and VR. Inhibited BChE was aged in the presence of H2O18 to allow incorporation of (18)O, if cleavage was at the P-X bond. Tryptic-peptide organophosphate conjugates were identified through peptide mass mapping. Our results showed no aging of VX- and VR-treated BChE at 25 degrees C, pH 7.0. However, BChE inhibited by dichlorvos, echothiophate, DFP, soman, sarin, and cyclohexyl sarin aged exclusively through O-C bond cleavage, i.e., the classical X-R scission pathway. In contrast, isomalathion aged through both X-R and P-X pathways; the main aged product resulted from P-S bond cleavage and a minor product resulted from O-C and/or S-C bond cleavage.","","","RefMan","","","","","","","","","",""
"Unknown","Unknown","Unknown","Unknown","","","2009","Andreotti, G., Freeman, L. E. B., Hou, L., Coble, J., Rusiecki, J., Hoppin, J. A., Silverman, D. T., Alavanja, M. C. R.","Agricultural pesticide use and pancreatic cancer risk in the Agricultural Health Study Cohort","","124(10):2495-2500","ef56b4de-d837-4fe2-a0b5-1534245b84d1","","Pancreatic cancer is a rapidly fatal disease that has been linked with pesticide use. Previous studies have reported excess risks of pancreatic cancer with organochlorines such as DDT, however, many other commonly used pesticides have not been examined. To further examine the potential associations between the use of a number of pesticides and pancreatic cancer, we conducted a case-control analysis in the Agricultural Health Study, one of the largest prospective cohorts with over 89,000 participants including pesticide applicators and their spouses in Iowa and North Carolina. This analysis included 93 incident pancreatic cancer cases (64 applicators, 29 spouses) and 82,503 cancer-free controls who completed an enrollment questionnaire providing detailed pesticide use, demographic and lifestyle information. Ever use of 24 pesticides and intensity-weighted lifetime days [(lifetime exposure days) x (exposure intensity score)] of 13 pesticides was assessed. Risk estimates were calculated using unconditional logistic regression controlling for age, smoking, and diabetes. Among pesticide applicators, 2 herbicides (EPTC and pendimethalin) of the 13 pesticides examined for intensity-weighted lifetime use showed a statistically significant exposure-response association with pancreatic cancer. Applicators in the top half of lifetime pendimethalin use had a 3.0-fold (95% CI 1.3-7.2, p-trend = 0.01) risk compared with never users, and those in the top half of lifetime EPTC use had a 2.56-fold (95% CI = 1.1-5.4, p-trend = 0.01) risk compared with never users. Organochlorines were not associated with an excess risk of pancreatic cancer in this study. These findings suggest that herbicides, particularly pendimethalin and EPTC, may be associated with pancreatic cancer. Â© 2008 Wiley-Liss, Inc.","","","RefMan","","","","","","","","","",""
"Unknown","Unknown","Unknown","Unknown","","","1998","Baris, D., Zahm, S. H., Cantor, K. P., Blair, A.","Agricultural use of DDT and risk of non-Hodgkin's lymphoma: pooled analysis of three case-control studies in the United States","Occupational and environmental medicine","55(8):522-7","7cb8270d-a7ce-4396-98d0-2f8bdf2128d9","","OBJECTIVES: The objective of this pooled analysis was to examine whether exposure to DDT was associated with the risk of non-Hodgkin's lymphoma among male farmers. METHODS: Data from three case-control studies from four midwestern states

in the United States (Nebraska, Iowa, Minnesota, Kansas) were pooled to carry out analyses of 993 cases and 2918 controls. Information on use of agricultural pesticides and other risk factors was based on interviews. Non-farmers (people who had never lived or worked on a farm) were used as a reference category. RESULTS: There were 161 cases and 340 controls who reported use of DDT on animals or crops, or on both, yielding an odds ratio (OR) of 1.2 (95% confidence intervals (95% CI) 1.0 to 1.6). Farmers who had used DDT for > or = 15 years had an OR of 1.5 (95% CI 1.0 to 2.3). Adjustment for respondent status and use of other pesticides resulted in slightly reduced ORs. Analyses by the number of days of use a year was limited to the Nebraska data. The most notable increase was found among farmers who used DDT for > or = 5 days a year (OR 2.6, 95% CI 1.1 to 5.9); however, additional adjustment for use of organophosphates, phenoxyacetic acids, and the individual pesticides lindane, malathion, and atrazine reduced the ORs to 1.0, 0.9, 1.1, 1.6, and 1.9 respectively. CONCLUSIONS: No strong consistent evidence was found for an association between exposure to DDT and risk of non-Hodgkin's lymphoma. It seems that the excess risk initially found may be explained by use of other pesticides.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2011","Ahmed, T., Pathak, R., Mustafa, M. D., Kar, R., Tripathi, A. K., Ahmed, R. S., Banerjee, B. D.","Ameliorating effect of N-acetylcysteine and curcumin on pesticide-induced oxidative DNA damage in human peripheral blood mononuclear cells","Environmental monitoring and assessment","179(1-4):293-9","752313a2-29a3-4713-93fa-2a4944724f97","","Endosulfan, malathion, and phosphamidon are widely used pesticides. Subchronic exposure to these contaminants commonly affects the central nervous system, immune, gastrointestinal, renal, and reproductive system. There effects have been attributed to increased oxidative stress. This study was conducted to examine the role of oxidative stress in genotoxicity following pesticide exposure using peripheral blood mononuclear cells (PBMC) in vitro. Further possible attenuation of genotoxicity was studied using N-acetylcysteine (NAC) and curcumin as known modulators of oxidative stress. Cultured mononuclear cells was isolated from peripheral blood of healthy volunteers, and exposed to varying concentrations of different pesticides: endosulfan, malathion, and phosphamidon for 6, 12, and 24 h. Lipid peroxidation was assessed by cellular malondialdehyde (MDA) level and DNA damage was quantified by measuring 8-hydroxy-2'-deoxyguanosine (8-OH-dG) using ELISA. Both MDA and 8-OH-dG were significantly increased in a dose-dependent manner following treatment with these pesticides. There was a significant decrease in MDA and 8-OH-dG levels in PBMC when co-treated with NAC or/and curcumin as compared to pesticide alone. These results indicate that pesticide-induced oxidative stress is probably responsible for the DNA damage, and NAC or curcumin attenuate this effect by counteracting the oxidative stress.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2009","Huskova, R., Matisova, E., Hrouzkova, S., Svorc, L.","Analysis of pesticide residues by fast gas chromatography in combination with negative chemical ionization mass spectrometry","Journal of chromatography. A","1216(35):6326-34","31ebc1a0-c92c-4c1a-983f-e147610e0e6c","","A combination of fast GC with narrow-bore column and bench top quadrupole mass spectrometer (MS) detector in negative chemical ionization (NCI) mode (with methane as reagent gas) is set up and utilized for the ultratrace analysis of 25 selected pesticides. The observed pesticides, belonging to the endocrine disrupting chemicals (EDCs), were from different chemical classes. A comparative study with electron impact (EI) ionization was also carried out (both techniques in selected ion monitoring (SIM)

mode). The programmed temperature vaporizer (PTV) injector in solvent vent mode and narrow-bore column (15mx0.15mm I.D.x0.15microm film of 5% diphenyl 95% dimethylsiloxane stationary phase) were used for effective and fast separation. Heptachlor (HPT) as internal standard (I.S.) was applied for the comparison of results obtained from absolute and normalized peak areas. Non-fatty food matrices were investigated. Fruit (apple - matrix-matched standards; orange, strawberry, plum - real samples) and vegetable (lettuce - real sample) extracts were prepared by a quick and effective QuEChERS sample preparation technique. Very good results were obtained for the characterization of fast GC-NCI-MS method analysing EDCs pesticides. Analyte response was linear from 0.01 to 150microgkg(-1) with the R(2) values in the range from 0.9936 to 1.0000 (calculated from absolute peak areas) and from 0.9956 to 1.0000 (calculated from peak areas normalized to HPT). Instrument limits of detection (LODs) and quantification (LOQs) were found at pgmL(-1) level and for the majority of analytes were up to three orders of magnitude lower for NCI compared to EI mode. In both ionization modes, repeatability of measurements expressed as relative standard deviation (RSDs) was less than 10% which is in very good agreement with the criterion of European Union.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2015","Bianchi, J., Mantovani, M. S., Marin-Morales, M. A.","Analysis of the genotoxic potential of low concentrations of Malathion on the Allium cepa cells and rat hepatoma tissue culture","Journal of environmental sciences (China)","36:102-11","9e444f55-39e9-4eaa-9d41-8d7690ca01ea","","Based on the concentration of Malathion used in the field, we evaluated the genotoxic potential of low concentrations of this insecticide on meristematic and F1 cells of Allium cepa and on rat hepatoma tissue culture (HTC cells). In the A. cepa, chromosomal aberrations (CAs), micronuclei (MN), and mitotic index (MI) were evaluated by exposing the cells at 1.5, 0.75, 0.37, and 0.18mg/mL of Malathion for 24 and 48hr of exposure and 48hr of recovery time. The results showed that all concentrations were genotoxic to A. cepa cells. However, the analysis of the MI has showed non-relevant effects. Chromosomal bridges were the CA more frequently induced, indicating the clastogenic action of Malathion. After the recovery period, the higher concentrations continued to induce genotoxic effects, unlike the observed for the lowest concentrations tested. In HTC cells, the genotoxicity of Malathion was evaluated by the MN test and the comet assay by exposing the cells at 0.09, 0.009, and 0.0009mg/5mL culture medium, for 24hr of exposure. In the comet assay, all the concentrations induced genotoxicity in the HTC cells. In the MN test, no significant induction of MN was observed. The genotoxicity induced by the low concentrations of Malathion presented in this work highlights the importance of studying the effects of low concentrations of this pesticide and demonstrates the efficiency of these two test systems for the detection of genetic damage promoted by Malathion.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2007","Thomas, R. S., Pluta, L., Yang, L., Halsey, T. A.","Application of genomic biomarkers to predict increased lung tumor incidence in 2-year rodent cancer bioassays","","97(1):55-64","b47174c1-b92a-466a-b898-aa2c6461818b","","Rodent cancer bioassays are part of a legacy of safety testing that has not changed significantly over the past 30 years. The bioassays are expensive, time consuming, and use hundreds of animals. Fewer than 1500 chemicals have been tested in a rodent cancer bioassay compared to the thousands of environmental and industrial chemicals that remain untested for carcinogenic activity. In this study, we used

existing data generated by the National Toxicology Program (NTP) to identify gene expression biomarkers that can predict results from a rodent cancer bioassay. A set of 13 diverse chemicals was selected from those tested by the NTP. Seven chemicals were positive for increased lung tumor incidence in female B6C3F1 mice and six were negative. Female mice were exposed subchronically to each of the 13 chemicals, and microarray analysis was performed on the lung. Statistical classification analysis using the gene expression profiles identified a set of eight probe sets corresponding to six genes whose expression correctly predicted the increase in lung tumor incidence with 93.9% accuracy. The sensitivity and specificity were 95.2 and 91.8%, respectively. Among the six genes in the predictive signature, most were enzymes involved in endogenous and xenobiotic metabolism, and one gene was a growth factor receptor involved in lung development. The results demonstrate that increases in chemically induced lung tumor incidence in female mice can be predicted using gene biomarkers from a subchronic exposure and may form the basis of a more efficient and economical approach for evaluating the carcinogenic activity of chemicals. Â© The Author 2007. Published by Oxford University Press on behalf of the Society of Toxicology. All rights reserved.","","","RefMan","","","","","","","","","","

"Unknown","Unknown","Unknown","Unknown","","","2008","Gwinn, M. R., Weston, A.","Application of oligonucleotide microarray technology to toxic occupational exposures","","71(5):315-324","ae0ae45e-9b9b-4492-9e09-54d2c129539c","","Microarray technology has advanced toward analysis of toxic occupational exposures in biological systems. Microarray analysis is an ideal way to search for biomarkers of exposure, even if no specific gene or pathway has been identified. Analysis may now be performed on thousands of genes simultaneously, as opposed to small numbers of genes as in the past. This ability has been put to use to analyze gene expression profiles of a variety of occupational toxins in animal models to classify toxins into specific categories based on response. Analysis of normal human cell strains allows an extension of this analysis to investigate the role of interindividual variation in response to various toxins. This methodology was used to analyze four occupationally related toxins in our lab: oxythioquinox (OTQ), a quinoxaline pesticide; malathion, an organophosphate pesticide; di-n-butyl phthalate (DBP), a chemical commonly found in personal care and cosmetic items; and benzo[a]pyrene (BaP), an environmental and occupational carcinogen. The results for each exposure highlighted signaling pathways involved in response to these occupational exposures. Both pesticides showed increase in metabolic enzymes, while DBP showed alterations in genes related to fertility. BaP exposure showed alterations in two cytochrome P450s related to carcinogenicity. When used with occupational exposure information, these data may be used to augment risk assessment to make the workplace safer for a greater proportion of the workforce, including individuals susceptible to disease related to exposures. Copyright Â© Taylor & Francis Group, LLC.","","","RefMan","","","","","","","","","","

"Unknown","Unknown","Unknown","Unknown","","","2016","Flora, S. J. S.","Arsenic and dichlorvos: Possible interaction between two environmental contaminants","","35:43-60","2aef0f18-49e0-4461-a3fc-d416eeef5143","","Metals are ubiquitously present in the environment and pesticides are widely used throughout the world. Environmental and occupational exposure to metal along with pesticide is an area of great concern to both the public and regulatory authorities. Our major concern is that combination of these toxicant present in environment may elicit toxicity either due to additive or synergistic interactions or 'joint toxic actions' among these toxicants. It poses a

rising threat to human health. Water contamination particularly ground water contamination with arsenic is a serious problem in today's scenario since arsenic is associated with several kinds of health problems, such arsenic associated health anomalies are commonly called as 'Arsenism'. Uncontrolled use and spillage of pesticides into the environment has resulted in alarming situation. Moreover serious concerns are being addressed due to their persistence in the environmental matrices such as air, soil and surface water runoff resulting in continuous exposure of these harmful chemicals to human beings and animals. Bio-availability of these environmental toxicants has been enhanced much due to anthropological activities. Dreadfully very few studies are available on combined exposures to these toxicants on the animal or human system. Studies on the acute and chronic exposure to arsenic and DDVP are well reported and well defined. Arsenic is a common global ground water contaminant while dichlorvos is one of the most commonly and widely employed organophosphate based insecticide used in agriculture, horticulture etc. There is thus a real situation where a human may get exposed to these toxicants while working in a field. This review highlights the individual and combined exposure to arsenic and dichlorvos on health.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2006","Foucault, C., Brouqui, P., Raoult, D.","Bartonella quintana characteristics and clinical management","","12(2):217-223","ac7b4ae4-74b3-4b0f-b1a1-5ecc719bf4eb","","Bartonella quintana, a pathogen that is restricted to human hosts and louse vectors, was first characterized as the agent of trench fever. The disease was described in 1915 on the basis of natural and experimental infections in soldiers. It is now recognized as a reemerging pathogen among homeless populations in cities in the United States and Europe and is responsible for a wide spectrum of conditions, including chronic bacteremia, endocarditis, and bacillary angiomatosis. Diagnosis is based on serologic analysis, culture, and molecular biology. Recent characterization of its genome allowed the development of modern diagnosis and typing methods. Guidelines for the treatment of B. quintana infections are presented.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2012","Mostafalou, S., Eghbal, M. A., Nili-Ahmadabadi, A., Baeeri, M., Abdollahi, M.","Biochemical evidence on the potential role of organophosphates in hepatic glucose metabolism toward insulin resistance through inflammatory signaling and free radical pathways","","28(9):840-851","5986a030-6c40-4f8e-ac5e-2a00aa2bcdaa","","Several studies show that organophosphate pesticides exert several effects on glucose homeostasis. The current study investigates the influence of subchronic exposure to malathion (MT) on hepatic gluconeogenesis in relation to acetyl cholinesterase (AChE) inhibition, oxidative stress and inflammatory response in the rat. MT was administered by gavage at doses of 25, 50 and 100 mg/kg for 32 days. Fasting hyperglycemia was seen in line with an increased activity of hepatic phosphoenolpyruvate carboxykinase, glucose 6-phosphatase and tumor necrosis factor Î±. In addition to the impaired glucose tolerance and inhibition of AChE in a dose-dependent manner, there were significant increases in hepatic lipid peroxidation, carbonyl groups and 8-deoxyguanosine as the biomarkers of reactive oxygen species-mediated damage to lipid, protein and DNA, respectively. Altered quality of the liver in glucose production especially gluconeogenesis could be a compensatory mechanism against MT toxicity or even result in tissue damage. MT-induced insulin resistance in the liver occurs through oxidative and inflammatory signaling pathways. Â© The Author(s) 2012.","","","RefMan","","","","","","","","","",""

"Unknown","Unknown","Unknown","Unknown","","","2013","Thomas, R., Thomas, R. S., Auerbach, S. S., Portier, C. J.","Biological Networks for Predicting Chemical Hepatocarcinogenicity Using Gene Expression Data from Treated Mice and Relevance across Human and Rat Species","","8(5)","abf519ac-fca3-4a06-b453-07aa2b713840","","Background:Several groups have employed genomic data from subchronic chemical toxicity studies in rodents (90 days) to derive gene-centric predictors of chronic toxicity and carcinogenicity. Genes are annotated to belong to biological processes or molecular pathways that are mechanistically well understood and are described in public databases.Objectives:To develop a molecular pathway-based prediction model of long term hepatocarcinogenicity using 90-day gene expression data and to evaluate the performance of this model with respect to both intra-species, dose-dependent and cross-species predictions.Methods:Genome-wide hepatic mRNA expression was retrospectively measured in B6C3F1 mice following subchronic exposure to twenty-six (26) chemicals (10 were positive, 2 equivocal and 14 negative for liver tumors) previously studied by the US National Toxicology Program. Using these data, a pathway-based predictor model for long-term liver cancer risk was derived using random forests. The prediction model was independently validated on test sets associated with liver cancer risk obtained from mice, rats and humans.Results:Using 5-fold cross validation, the developed prediction model had reasonable predictive performance with the area under receiver-operator curve (AUC) equal to 0.66. The developed prediction model was then used to extrapolate the results to data associated with rat and human liver cancer. The extrapolated model worked well for both extrapolated species (AUC value of 0.74 for rats and 0.91 for humans). The prediction models implied a balanced interplay between all pathway responses leading to carcinogenicity predictions.Conclusions:Pathway-based prediction models estimated from sub-chronic data hold promise for predicting long-term carcinogenicity and also for its ability to extrapolate results across multiple species.","","","RefMan","","","","","","","","","","" "Unknown","Unknown","Unknown","Unknown","","","2015","Hofmann, J. N., Beane Freeman, L. E., Lynch, C. F., Andreotti, G., Thomas, K. W., Sandler, D. P., Savage, S. A., Alavanja, M. C.","The Biomarkers of Exposure and Effect in Agriculture (BEEA) Study: Rationale, Design, Methods, and Participant Characteristics","","78(21-22):1338-1347","f99e135c-9481-4a19-b8a4-68fc6946a0ca","","Agricultural exposures including pesticides, endotoxin, and allergens have been associated with risk of various cancers and other chronic diseases, although the biological mechanisms underlying these associations are generally unclear. To facilitate future molecular epidemiologic investigations, in 2010 the study of Biomarkers of Exposure and Effect in Agriculture (BEEA) was initiated within the Agricultural Health Study, a large prospective cohort in Iowa and North Carolina. Here the design and methodology of BEEA are described and preliminary frequencies for participant characteristics and current agricultural exposures are reported. At least 1,600 male farmers over 50 years of age will be enrolled in the BEEA study. During a home visit, participants are asked to complete a detailed interview about recent agricultural exposures and provide samples of blood, urine, and (since 2013) house dust. As of mid-September 2014, in total, 1,233 participants have enrolled. Most of these participants (83%) were still farming at the time of interview. Among those still farming, the most commonly reported crops were corn (81%) and soybeans (74%), and the most frequently noted animals were beef cattle (35%) and hogs (13%). There were 861 (70%) participants who reported occupational pesticide use in the 12 months prior to interview; among these participants, the most

frequently noted herbicides were glyphosate (83%) and 2,4-D (72%), and most commonly reported insecticides were malathion (21%), cyfluthrin (13%), and permethrin (12%). Molecular epidemiologic investigations within BEEA have the potential to yield important new insights into the biological mechanisms through which these or other agricultural exposures influence disease
risk.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2015","Arshad, M., Siddiqa, M., Rashid, S., Hashmi, I., Awan, M. A., Ali, M. A.","Biomonitoring of Toxic Effects of Pesticides in Occupationally Exposed Individuals","","","127de679-322d-4d3a-8715-23ca3e70d280","","Background: Workers in pesticide manufacturing industries are constantly exposed to pesticides. Genetic biomonitoring provides an early identification of potential cancer and genetic diseases in exposed populations. The objectives of this biomonitoring study were to assess DNA damage through comet assay in blood samples collected from industry workers and compare these results with those of classical analytical techniques used for complete blood count analysis. Methods: Samples from controls (n = 20) and exposed workers (n = 38) from an industrial area in Multan, Pakistan, were subjected to various tests. Malathion residues in blood samples were measured by gas chromatography. Results: The exposed workers who were employed in the pesticide manufacturing industry for a longer period (i.e., 13-25 years) had significantly higher DNA tail length (7.04 Î¼m) than the controls (0.94 Î¼m). Workers in the exposed group also had higher white blood cell and red blood cell counts, and lower levels of mean corpuscular hemoglobin (MCH), MCH concentration, and mean corpuscular volume in comparison with normal levels for these parameters. Malathion was not detected in the control group. However, in the exposed group, 72% of whole blood samples had malathion with a mean value of 0.14 mg/L (range 0.01-0.31 mg/L). Conclusion: We found a strong correlation (R 2 = 0.91) between DNA damage in terms of tail length and malathion concentration in blood. Intensive efforts and trainings are thus required to build awareness about safety practices and to change industrial workers' attitude to prevent harmful environmental and anthropogenic effects.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2010","Andreotti, G., Hou, L., Beane Freeman, L. E., Mahajan, R., Koutros, S., Coble, J., Lubin, J., Blair, A., Hoppin, J. A., Alavanja, M.","Body mass index, agricultural pesticide use, and cancer incidence in the Agricultural Health Study cohort","","21(11):1759-1775","6828aac1-3fee-474f-b063-f8b30be6c6b5","","Obesity is associated with increased risks of several cancers including colon and female breast. Pesticide use in agricultural populations has also been linked with higher risks of various cancers. However, the interaction between obesity and pesticide use on cancer risk has not been well studied. Using data from the Agricultural Health Study, we examined the association between body mass index (BMI) and the risk of cancer at 17 sites and the interaction between BMI and pesticide use. Pesticide applicators residing in Iowa and North Carolina and their spouses were enrolled between 1993 and 1997 and given a self-administered questionnaire to obtain pesticide use and other information. This analysis included 39,628 men and 28,319 women with height and weight data who were cancer-free at enrollment. Among these participants, 4,432 were diagnosed with cancer between enrollment and 2005 and 64% were overweight or obese. BMI (per 1 kg/m2) was positively associated with colon cancer in men (hazard ratio (HR) 1.05, 95% confidence interval (CI) 1.02-1.09) and breast cancer in postmenopausal women (HR 1.03, 95% CI 1.01-1.06). In contrast, BMI was inversely

associated with lung cancer in men, with a significant association in ever smokers (HR 0.92, 95% CI 0.88-0.97) and a null association in never smokers. The positive association between BMI and colon cancer in men was significant in those who ever used carbofuran (HR = 1.10, 95% CI 1.04-1.17; p-interaction = 0.04) or metolachlor (HR = 1.09, 95% CI 1.04-1.15; p-interaction = 0.02) but was null in non-users of these pesticides. Among male ever smokers, the inverse association between BMI and lung cancer was significant in non-users of carbofuran (HR = 0.87, 95% CI = 0.82-0.92) but was null in users of carbofuran (p-interaction = 0.02). These findings suggest that certain pesticides may modify the effects of BMI on the risks of colon and lung cancers. Â© 2010 US Government.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2005","Mills, P. K., Yang, R.","Breast cancer risk in Hispanic agricultural workers in California","International journal of occupational and environmental health","11(2):123-31","df01a2ef-cbc2-498e-802e-de0c7c939b12","","In a registry-based case-control study of breast cancer in farm labor union members in California, 128 breast cancer (BC) cases newly diagnosed in 1988--2001 and 640 cancer-free controls were investigated. Stage and grade of disease at diagnosis were about the same as in the California Hispanic population. Risk of breast cancer was not associated with work with any specific crops or commodities except mushrooms, where the adjusted odds ratio (OR) was 6.00 (95% CI 2.01-18.0). Controlling for covariates, adjusted ORs (and 95% CIs) for breast cancer in quartiles of pesticide use were 1.00, 1.30 (0.73-2.30), 1.23 (0.67-2.27), and 1.41 (0.66-3.02). Chlordane, malathion, and 2,4-D were associated with increased risk. Risk associated with chemical use was stronger in younger women, those with early-onset breast cancer, and those diagnosed earlier (1988--1994).","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2011","Kement, M., Gezen, C., AÅŸik, A., KaraÃ¶z, A., Ã-ven UstaalioÇ§lu, B., Bilici, A., Ã-ncel, M.","Breast conserving surgery and modified radical mastectomy in turkish women with breast cancer: A prospective analysis of quality of life","","31(6):1377-1384","6b415352-b01b-4f14-a531-a9f00df734ea","","Objective: The aim of this study is to compare the postoperative quality of life of the patients who underwent breast conserving surgery followed by radiotherapy (BCT) and the patients who underwent modified radical mastectomy (MRM) in our clinic. Material and Methods: The patients who were operated on with diagnosis of breast cancer in our clinic between January 2006 and January 2008 were included in the study. Those who received neoadjuvant therapy and who required radiotherapy after modified radical mastectomy and those in ASA classes 3 and 4 were excluded. The patients who were treated with modified radical mastectomy were included in the first group (Group MRM) and the patients who were treated with breast conserving therapy and radiotherapy thereafter were included in the second group (Group BCT). Ouality of life of the patients were assessed using Medical Outcome Syudy-Short Form 36 (MOS SF-36) form six months after their treatment (surgery, radiotherapy, chemotherapy) was completed. Results: There were no significant differences between two groups in terms of age, evaluated socioeconomic parameters (education, income, marital status) and clinical parameters (stage, complications, adjuvant chemotherapy). Quality of life of the patients who underwent BCT (n= 27) was worse than that of general Turkish population in six of eight (except vitality and social function) SF-36 scale and worse than mean values of normal individuals in NSABP BCPT trial in seven of eight (except vitality) scales. Besides, while physical component score was worse than that of general population (45.3 vs 52.6), mental component score (MCS) was relatively similar

to general population (53.4 vs 51.7). When quality of life of the patients who underwent MRM (n= 23) and BCT were compared, mean values of BCT group were found to be better in all scales and the difference was found to be statistically significant in six out of eight (except vitality and social function) scales (p< 0.05). Conclusion: It can be stated that quality of life of the patient who underwent BCT due to breast cancer is impaired in terms of physical status, however did not change in terms of mental status. It can also be stated that quality of life of the patients who underwent breast conserving therapy were better than the ones who underwent modified radical mastectomy in terms of both physical and mental status. Â© 2011 by TÃ¼rkiye Klinikleri.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2008","Calaf, G. M., Roy, D.","Cancer genes induced by malathion and parathion in the presence of estrogen in breast cells","","21(2):261-268","5f6b5b3e-623f-49de-8887-28e70c541498","","The identification of genes involved in the process of neoplastic transformation is essential for analyzing the progression of breast cancer when induced by endogenous and exogenous agents, among which are the estrogens and the organophosphorous pesticides, respectively. It is important to consider the impact of such substances when they are present in combination. In vitro experimental models are needed in order to understand breast carcinogenesis. The aim of this work was to examine the effect of 17Î² estradiol (estrogen) combined with either malathion or parathion on the transformation of human breast epithelial cells in vitro. Results showed that estrogen combined with either malathion or parathion altered cell proliferation and induced cell transformation as well as exhibited significant invasive capabilities as compared to the control MCF-10F cell line. Several genes were up-regulated by the effect of all of the treatments, such as the cyclins, cyclin D1 and cyclin-dependent kinase 4, IGFBP3 and IGFBP5, and keratin 18. The c-Ha-ras oncogene was up-regulated by the effect of malathion alone and with the combination of estrogen and either malathion or parathion. The DVL1 gene was up-regulated only with malathion alone and the combination of parathion with estrogen. Expression of the HSP 27, MCM2 and TP53 inducible protein 3 genes was up-regulated with malathion alone and with the combination of estrogen and either malathion or parathion while TP53 (Li-Fraumeni syndrome) was up-regulated by estrogen alone and malathion alone. Thus, we suggest that pesticides and estrogens affect human breast cells inducing molecular changes indicative of transformation.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2015","Guyton, K. Z., Loomis, D., Grosse, Y., El Ghissassi, F., Benbrahim-Tallaa, L., Guha, N., Scoccianti, C., Mattock, H., Straif, K.","Carcinogenicity of tetrachlorvinphos, parathion, malathion, diazinon, and glyphosate","The Lancet. Oncology","16(5):490-1","c691bc60-70aa-4993-bf1e-9031d8641ee9","","","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2015","Guyton, K. Z., Loomis, D., Grosse, Y., El Ghissassi, F., Benbrahim-Tallaa, L., Guha, N., Scoccianti, C., Mattock, H., Straif, K., Blair, A., Fritschi, L., McLaughlin, J., Sergi, C. M., Calaf, G. M., Le Curieux, F., Baldi, I., Forastiere, F., Kromhout, H., t Mannetje, A., Rodriguez, T., Egeghy, P., Jahnke, G. D., Jameson, C. W., Martin, M. T., Ross, M. K., Rusyn, I., Zeise, L.","Carcinogenicity of tetrachlorvinphos, parathion, malathion, diazinon, and glyphosate","","16(5):490-491","d1891ea3-16f0-42e9-9cee-027830e606a9","","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2009","Cakir, C., Hallac Keser, S.,

Kayahan, S., Ege Gul, A., Ergen, C., Barisik, N., Eryildirim, B., Karadayi, N.","Carcinosarcoma of the renal pelvis: A case report","","455:S151","c1a68e86-d1f3-44cd-aec3-652bb4d90cb3","","Background: Carcinosarcomas of the renal pelvis is very rare neoplasm. These tumors are composed of both malignant mesenchymal and epithelial elements. Histologically, it exhibits morphologic and/or immunohistochemical evidence of epithelial and mesenchymal differentiation with the presence or absence of heterologous elements. Carcinosarcomas of the renal pelvis are known to be rapid in progression and associated with a poor prognosis. Methods: We present the case of a 72-year-old man with gross hematuria and flank pain. Radiologic studies revealed a large left kidney mass. Radikal nephrectomy was performed. Results: In the renal pelvis irregular shaped 10Ã-9Ã-8 cm mass was seen. The cut section of the mass was gray-white, focally necrotic and hemorrhagic. The tumor had invaded the renal parenchyma was also noted. Extrarenal extension of the tumor was observed. Microscopically, on the sections infiltrating urothelial carcinoma and sarcomatous component including numerous osteoclast-like multinucleated giant cells was seen. There were also foci of squamous differentiation. Two lymph nodes locating at the hilum of the kidney showed metastasis. Immunohistochemically, epithelial component showed a diffuse reactivity for cytokeratin, whereas sarcomatous components react with vimentin, CD68 and focally SMA. There was no staining of the sarcomatous component with cytokeratin. Conclusion(s): In the case report, the clinical presentation, histopathologic and immunohistochemical features of the case are reported and discussed in the light of literature.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2011","GÃ¼ltekin, E., CingillioÇ§lu, B., Ayaz, D., Yildirim, Y.","A case of stage IA2 cervical cancer treated with radical abdominal trachelectomy","","21(2):124-129","cdd8a5a5-1d94-4b04-9157-3857fae45b7e","","Cervical cancer is the second most common cancer in women. Nowadays approximately half of the cases younger than 45 years old. Treatment of cervical cancer, varies according to stage of disease. In the early stage, radical hysterectomy with pelvic lymphadenectomy or chemoradiotheraphy are recommended for standart treatment that affect fertility adversely in reproductive aged women. New therapeutic options in the treatment of this disease have been developed because of increasing incidence of cervical cancer in young population who have not already completed their fertility. Herein, a therapeutic option of radical abdominal trachelectomy with pelvic lymphadenectomy performed in a stage IA2 cervical cancer patient who desire to preserve her fertility has been discussed together with literature. Copyright Â© 2011 by TÃ¼rkiye Klinikleri.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2011","Calaf, G. M., Garrido, F.","Catechol estrogens as biomarkers for mammary gland cancer","","39(1):177-183","50fb4482-9c75-41b9-998e-08665bbb60f2","","The origin of human tumors has been attributed to the exposure to several environmental chemicals and implicated in the increase of incidence in breast cancer. Progression of breast cancer follows a complex multistep process that seems to depend on various exogenous and endogenous factors. The aim of this study was to examine the effects of the organophosphorous pesticide malathion in the presence of estrogen on neoplastic transformation of rat mammary glands. Virgin female rats were sacrificed after 30, 124 and 240 days of 5-day injections twice a day. There were four groups: i) control, ii) malathion (22 mg/100 g body weight, BW), iii) 17Î²-estradiol (30 Î¼g/100 g BW) and iv) combination of both. Progressive alterations in ducts were observed by the effect of malathion in comparison

to control after 240 days. Ducts markedly increased in size and number of cells per square millimeter and tumors similar to ductal carcinoma were originated. The increase in number of proliferative ducts per square millimeter was significantly (P<0.05) higher in malathion-treated animals compared to the other groups. Progressive alterations in lobules with estrogen treatment were found after 240 days. Lobules became markedly abnormal, referred to as secretory lobules, increased in number and size and the tumors originated were similar to lobular carcinoma. The increase in number of secretory lobules was significantly (P<0.05) higher in estrogen-treated animals compared to the other groups. Treatment with the combination of malathion and estrogen gave rise to tumors constituted of both proliferative ducts and secretory lobules as well as formation of estrogen metabolites such as 2 and 4 catechol estrogens in the blood of the animals after 240 days. We concluded that morphological changes and alterations in the blood of the animals can be used as biomarkers for mammary gland cancer. Copyright Â© 2011 Spandidos Publications Ltd. All rights reserved.","","","RefMan","","","","","","","","","" "Unknown","Unknown","Unknown","Unknown","","","2010","Joyce, M. A., Tyrrell, D. L. J.","The cell biology of hepatitis C virus","","12(4):263-271","8fc36ba1-74b6-4f1d-8769-20389fd92ddf","","Hepatitis C virus infects 3% of the world's population and has a variable disease course with potentially sever outcomes, liver failure and hepatocellular carcinoma. The influence of HCV the biology of infected hepatocytes is now just becoming known. This review will focus on effect of HCV on host cells. Â© 2010 Elsevier Masson SAS. All rights reserved.","","","RefMan","","","","","","","","","" "Unknown","Unknown","Unknown","Unknown","","","2007","Calaf, G. M., Parra, E., Garrido, F.","Cell proliferation and tumor formation induced by eserine, an acetylcholinesterase inhibitor, in rat mammary gland","","17(1):25-33","b7f538b0-8b5d-428f-a28f-b0d04a2cc347","","Environmental chemicals may be involved in the etiology of breast cancer. There is substantial evidence that breast cancer risk is associated with prolonged exposure to female hormones. Among these hormonal influences a leading role is attributed to the ovarian hormone estradiol, since breast cancer does not develop in the absence of ovaries. The rat mammary gland has special characteristics that make it an ideal organ for studying development, cell proliferation and transformation. In vivo and in vitro model systems for cell proliferation and mammary carcinogenesis have allowed morphological and biochemical analysis under different experimental conditions. The aim of this study was to examine the effect of eserine, an acetylcholinesterase inhibitor, as are the organophosphorous compounds malathion and parathion, and 17beta estradiol on cell proliferation and tumor formation that takes place in the rat mammary gland after in vivo and in vitro treatment. These studies showed that eserine and 17beta estradiol were capable of inducing carcinogenesis in the epithelium of rat mammary glands. It was found that there was a significant increase in the number of cells per duct of the 44-day-old rat mammary gland after the 10-day eserine treatment, compared to the control. A higher increase was observed in the animals treated for 10 days with eserine followed by 30-daily injections of estrogen in comparison to control animals. In 12 animals, two mammary tumors were directly developed in response to 17beta estradiol injected at 39 days of age with a latency period of 180 and 245 days, respectively. Such tumors were metastatic to the lung. These results suggest that terminal end buds are major targets related to rat mammary carcinogenesis and 17beta estradiol can be an initiator and promoter in this process.","","","RefMan","","","","","","","","","",""

"Unknown","Unknown","Unknown","Unknown","","","2008","Fernandez-Obregon, A. C., Shah, D., Howell, A. I., Bentahar, I. T., Carrodeguas, L., Siddiqui, A., Ejiogu, J. A.","Challenges in anti-infective therapy for skin conditions: Part 2","","3(3):395-411","b01a2184-29a5-4c41-85b4-706d4ede7e9f","","Currently, clinicians face a wide gamut of challenges in the treatment of infectious conditions of the skin. Economic factors generated by healthcare management agencies and beyond the control of the clinician may serve to restrict access to specific medications and indirectly restrict patient access to appropriate care. An area of very recent concern is centered on the growing prevalence of methicillin-resistant Staphylococcus aureus. Herpes simplex virus type 2 prevalence has for the first time shown a surprising downward trend, offsetting the expected continuation in upward escalation seen for the previous decades. Newer pharmacological agents have facilitated control of fungal and parasitic infections. More dermatologists are becoming involved in the field of wound care, where appreciation of microbial colonization may play an equally important role to that of frank wound infection. The novel use of biologicals for the treatment of psoriasis heralds the need for constant vigilance for the potential emergence of granulomatous infections, such as TB. Â© 2008 Expert Reviews Ltd.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2001","Videira, R. A., Antunes-Madeira, M. C., Lopes, V. I., Madeira, V. M.","Changes induced by malathion, methylparathion and parathion on membrane lipid physicochemical properties correlate with their toxicity","Biochimica et biophysica acta","1511(2):360-8","7ad91bfe-8575-41ee-ab3e-896a4fad00c0","","Perturbations induced by malathion, methylparathion and parathion on the physicochemical properties of dipalmitoylphosphatidylcholine (DPPC) were studied by fluorescence anisotropy of DPH and DPH-PA and by differential scanning calorimetry (DSC). Methylparathion and parathion (50 microM) increased the fluorescence anisotropy evaluated by DPH-PA and DPH, either in gel or in the fluid phase of DPPC bilayers, but mainly in the fluid phase. Parathion is more effective than methylparathion. On the other hand, malathion had almost no effect. All the three xenobiotics displaced the phase transition midpoint to lower temperature values and broadened the phase transition profile of DPPC, the effectiveness following the sequence: parathion>methylparathion>>malathion. A shifting and broadening of the phase transition was also observed by DSC. Furthermore, at methylparathion/lipid molar ratio of 1/2 and at parathion/lipid molar ratio of 1/7, the DSC thermograms displayed a shoulder in the main peak, in the low temperature side, suggesting coexistence of phases. For higher ratios, the phase transition profile becomes sharp as the control transition, but the midpoint is shifted to the previous shoulder position. Conversely to methylparathion and parathion, malathion did not promote phase separation. The overall data from fluorescence anisotropy and calorimetry indicate that the degree of effect of the insecticides on the physicochemical membrane properties correlates with toxicity to mammals. Therefore, the in vivo effects of organophosphorus compounds may be in part related with their ability to perturb the phospholipid bilayer structure, whose integrity is essential for normal cell function.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2013","Angelini, D. J., Dorsey, R. M., Willis, K. L., Hong, C., Moyer, R. A., Oyler, J., Jensen, N. S., Salem, H.","Chemical warfare agent and biological toxin-induced pulmonary toxicity: Could stem cells provide potential therapies?","","25(1):37-62","8a1697c8-6eb6-4a37-a6a6-

621204891972","","Chemical warfare agents (CWAs) as well as biological toxins present a significant inhalation injury risk to both deployed warfighters and civilian targets of terrorist attacks. Inhalation of many CWAs and biological toxins can induce severe pulmonary toxicity leading to the development of acute lung injury (ALI) as well as acute respiratory distress syndrome (ARDS). The therapeutic options currently used to treat these conditions are very limited and mortality rates remain high. Recent evidence suggests that human stem cells may provide significant therapeutic options for ALI and ARDS in the near future. The threat posed by CWAs and biological toxins for both civilian populations and military personnel is growing, thus understanding the mechanisms of toxicity and potential therapies is critical. This review will outline the pulmonary toxic effects of some of the most common CWAs and biological toxins as well as the potential role of stem cells in treating these types of toxic lung injuries. Â© 2013 Informa Healthcare USA,
Inc.","","","RefMan","","","","","","","","","",""
"Unknown","Unknown","Unknown","Unknown","","","2009","Greim, H., Hartwig, A., Reuter, U., Richter-Reichhelm, H. B., Thielmann, H. W.","Chemically induced pheochromocytomas in rats: Mechanisms and relevance for human risk assessment","","39(8):695-718","658e4119-880b-425d-9df7-89eff162377d","","Pheochromocytomas are tumors originating from chromaffin cells of the adrenal medulla, which have been observed in numerous carcinogenicity studies. The authors have evaluated pheochromocytoma concurrence with other effects and the possible mechanisms, in order to assess the relevance of such data for the classification of carcinogenic effects and their relevance to humans. The evaluation revealed that pheochromocytomas occur with relatively higher frequency in male rats, especially when the following conditions are involved: hypoxia, uncoupling of oxidative phosphorylation, disturbance in calcium homeostasis, and disturbance of the hypothalamic endocrine axis. The underlying biochemical mechanisms suggest that other substances that interfere with these biochemical endpoints also produce pheochromocytomas. Such endpoints include enzymes involved in catecholamine synthesis, receptor tyrosine kinase (RET), hypoxia-inducible factor (HIF), succinate dehydrogenase, fumarate hydratase, and pyruvate dehydrogenase. To date, there is no indication that the substances inducing pheochromocytomas in animal experiments also induce corresponding tumors in humans. Because the mechanisms of action identified in rats are to be expected in humans, pheochromocytomas may be induced after exposure conditions similar to those used in the animal studies. Whether hereditary mutations represent a risk factor in humans is not clear. Pheochromocytomas that occur in animal experiments currently appear to have little relevance for conditions at the work place. When sufficiently documented and evaluated, such secondary pheochromocytomas are not relevant for classification and human risk assessment. Â© 2009 Informa UK Ltd.","","","RefMan","","","","","","","","","",""
"Unknown","Unknown","Unknown","Unknown","","","2015","Telli, O., SarÄ±cÄ±, H., YÃ¼cetÃ¼rk, C. N., Ã-zgÃ¼r, B. C., Kabar, M.","Chromophobe renal cell carcinoma: Evaluation of 21 cases with a large radical nephrectomy series","","6(2):177-179","b19fd0e6-c7dd-468c-8671-9b2b4b4f6fe1","","Aim: Chromophobe renal cell carcinoma comprises % 4-10 of the total cases of RCC. In this study we aim to determine frequency, clinical outcome and survival of chromophobe renal cell carcinoma in a large radical nephrectomy series. Material and Method: Between January 2001 and April 2013, 352 patients with regular follow-up and the diagnosis of localized or metastatic RCC treated with surgery were included in this study. Evaluated in the con-text of the

records of these patients were analyzed in chromophobe RCC. Mean follow-up time was 37.12 months. Results: 21 of 352 RCC patients were diagnosed as chromophobe RCC. All of the patients ranged from patho-logic stage pT1-2. None of the pathology was observed multifocality and microvascular invasion.There was no lymph node or distant metastasis with long term follow-up and 5-year disease-specific survival was 100%. Discus-sion: Despite the pressing need for more studies to determine diagnostic and prognostic tools, chromophobe renal cell carcinoma of kidney have good prognostic features.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2013","SelcÂ¸uk, S.","Coexistence of modified radical mastectomy and complex regional pain syndrome type 1","","59:264","acade925-68ef-4923-ab47-b28fa50cb363","","Complex regional pain syndrome (CRPS), is a chronic and progressive disease leading to pain and loss of function. There is no clear nerve injury in CRPS type 1. The clinical findings of this condition include pain, edema, disturbance in cutaneous blood flow and abnormal sudomotor activities. Modified radical mastectomy (MRM) can be described as simple mastectomy and axillary dissection. Our aim is to present a patient, who developed type 1 CRPS following MRM. 35-year old female patient was referred to our clinic with the complaint of left arm pain and left shoulder disability, 4 months after MRM performed for left breast cancer. In her physical examination, left shoulder active and passive movements were painful in all directions, left elbow, wrist and finger movements were painful, and there was allodynia with a slight touch. Left hand was swollen, the skin was wet and pale. X-rays of the cervical spine and shoulder were normal. Spotted osteoporosis was detected in the left hand. Blood tests, nerve conduction studies and cervical MRI study were all normal. 3 phase bone scintigraphy demonstrated increased perfusion and hyperemia in the left forearm, wrist and hand. Increased activity was seen in shoulder, elbow, and hand. These scintigraphic findings were consistent with CRPS. Diclophenac sodium 150 mg/d was ordered for the patient. In addition to the pharmacological treatment, whirpool, TENS, and appropriate exercise programme were also applied. Pregabalin 300 mg/d was added to the therapy for recurrent pain. Escitalopram 10 mg was recommended by a psychiatrist to treat anxiety. The left shoulder movements were found to improve close to normal functioning in the 4th follow up examination of the patient. Pain and edema of the left arm relieved. The patient was recommended pregabalin and outpatient follow up at the discharge from the hospital. CRPS can be rarely seen following MRM. It should be considered especially in cases of persistent upper extremity pain. Early diagnosis and treatment can prevent functional losses.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2007","Mansouri, Y., Johnston, G.","Common rashes in children: 2","","68(9):M166-M168","1a973e15-a80d-4edb-bcf2-b12e7140fbf0","","","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2011","Bhagavatula, M., Powell, C.","Common superficial skin infections and infestations","","21(3):132-136","74486eb9-0269-4e4a-948a-518e8f24acb5","","There are many paediatric infections and infestations of the skin. There are clearly many more skin infections that can occur worldwide and as populations become more mobile can be acquired elsewhere and present in the UK. The following paper examines the common problems encountered in UK practice. Common bacterial problems such as cellulitis, impetigo and erysipelas; viral infections such as molluscum contagiosum, herpes simplex, viral warts, human herpes-6 infection; fungal infections such as tinea corporis and pityriasis versicolor and finally parasitic

infections such as scabies and pediculosis are discussed from a pragmatic view point. Â© 2010 Elsevier Ltd.","","","RefMan","","","","","","","","","","Unknown","Unknown","Unknown","Unknown","","","2014","Wofford, P., Segawa, R., Schreider, J., Federighi, V., Neal, R., Brattesani, M.","Community air monitoring for pesticides. Part 3: Using health-based screening levels to evaluate results collected for a year","","186(3):1355-1370","ba4a38ff-e172-4f0a-b9c6-eacb28dd263b","","The CA Department of Pesticide Regulation (CDPR) and the CA Air Resources Board monitored 40 pesticides, including five degradation products, in Parlier, CA, to determine if its residents were exposed to any of these pesticides and, if so, in what amounts. They included 1,3-dichloropropene, acrolein, arsenic, azinphos-methyl, carbon disulfide, chlorpyrifos and its degradation product, chlorthalonil, copper, cypermethrin, diazinon and its degradation product, dichlorvos, dicofol, dimethoate and its degradation product, diuron, endosulfan and its degradation product, S-ethyl dipropylcarbamothioate (EPTC), formaldehyde, malathion and its degradation product, methyl isothiocyanate (MITC), methyl bromide, metolachlor, molinate, norflurazon, oryzalin, oxyfluorfen, permethrin, phosmet, propanil, propargite, simazine, SSS-tributylphosphorotrithioate, sulfur, thiobencarb, trifluralin, and xylene. Monitoring was conducted 3 days per week for a year. Twenty-three pesticides and degradation products were detected. Acrolein, arsenic, carbon disulfide, chlorpyrifos, copper, formaldehyde, methyl bromide, MITC, and sulfur were detected in more than half the samples. Since no regulatory ambient air standards exist for these pesticides, CDPR developed advisory, health-based non-cancer screening levels (SLs) to assess acute, subchronic, and chronic exposures. For carcinogenic pesticides, CDPR assessed risk using cancer potency values. Amongst non-carcinogenic agricultural use pesticides, only diazinon exceeded its SL. For carcinogens, 1,3-dichloropropene concentrations exceeded its cancer potency value. Based on these findings, CDPR has undertaken a more comprehensive evaluation of 1,3-dichloropropene, diazinon, and the closely related chlorpyrifos that was frequently detected. Four chemicals - acrolein, arsenic, carbon disulfide, and formaldehyde - sometimes used as pesticides were detected, although no pesticidal use was reported in the area during this study. Their presence was most likely due to vehicular or industrial emissions. Â© 2013 Springer Science+Business Media.","","","RefMan","","","","","","","","","","Unknown","Unknown","Unknown","Unknown","","","1999","Barber, D., Correll, L., Ehrich, M.","Comparative effectiveness of organophosphorus protoxicant activating systems in neuroblastoma cells and brain homogenates","Journal of toxicology and environmental health. Part A","57(1):63-74","cbe28276-b262-48e9-b7ae-d147ae72e610","","The ability of bromine and rat liver microsomes (RLM) to convert organophosphorus (OP) protoxicants to esterase inhibitors was determined by measuring acetylcholinesterase (AChE) and neuropathy target esterase (NTE) inhibition. Species specific differences in susceptibility to esterase inhibition were determined by comparing the extent of esterase inhibition observed in human neuroblastoma cells and hen, bovine, and rodent brain homogenates. OP protoxicants examined included tri-o-tolyl phosphate (TOTP), O-ethyl O-p-nitrophenyl phenylphosphonothioate (EPN), leptophos, fenitrothion, fenthion, and malathion. Bromine activation resulted in greater AChE inhibition than that produced by RLM activation for equivalent concentrations of fenitrothion, malathion, and EPN. For EPN and leptophos, bromine activation resulted in greater inhibition of NTE than RLM. Only preincubation with RLM activated TOTP; resultant inhibition of AChE was less in hen brain (13 +/- 3%) than in neuroblastoma cells (73 +/- 1%) at 10(-6) M.

In contrast, 10(-6) M RLM-activated TOTP produced more inhibition of hen brain NTE (89 +/- 6%) than NTE of human neuroblastoma cells (72 +/- 7%). Human neuroblastoma cells and brain homogenates from hens, the accepted animal model for study of OP-induced neurotoxicity, were relatively similar in sensitivity to esterase inhibition. Homogenates from hens were more sensitive to NTE inhibition induced by phenyl saligenin phosphate (PSP), an active congener of TOTP, than were homogenates from less susceptible species (mouse, rat, bovine). AChE of hen brain homogenates was also more sensitive than homogenates from other species to malaoxon, the active form of malathion.","","","RefMan","","","","","","","","","",""
"Unknown","Unknown","Unknown","Unknown","","","2009","Tuygun, C., Demirel, F., Yigitbasi, O., Bozkurt, H., Bakirtas, H., Imamoglu, A., Adresi, Y.","Comparison of Gleason scores in specimens of transrectal prostate needle biopsy and radical prostatectomy","","19(3):129-133","18e45120-1ee7-49e6-8c5f-8e70afd76484","","We investigated the correlation between biopsy and prostatectomy specimens, and evaluated the accuracy of treatment decision regarding to biopsy results in patients who have candidate to active-surveillance for localized prostate cancer (PC). Gleason score (GS) of the 118 patients who had undergone radical prostatectomy for PC after biopsy, were evaluated. Patients were cathegorized as low, intermediate and high-risk-PC regarding to rectal examination, serum PSA level and biopsy GS. Then, patients were reevaluated with prostatectomy GS (secondary-evaluation). Correlation and discorrelation in GS were determined in 52 and 66 (55.93%) patients, respectively. At biopsy, lower and higher grading was observed in 48 and 18 patients, respectively. Of 63 patients with low-risk-PC at primary-evaluation, 16 (25.39%) had intermediate-risk-PC at second-evaluation. Discorrelation was found in the rate of 56%, and it was more observed as low grading at biopsy. Finally, it should be considered that patients who will perform active-surveillance may be confronted with risk of undertreatment, with the assumption that 25% of patients with low-risk-PC may have actually intermediate-risk PC.","","","RefMan","","","","","","","","","",""
"Unknown","Unknown","Unknown","Unknown","","","2007","BakirtaÅŸ, H., Tuygun, C., Karakoyunlu, N., ÅžentÃ¼rk, A. B., Ersoy, H.","Comparison of nephron sparing surgery and radical nephrectomy in renal cell carcinomas of less than 7 cm","","17(1):7-15","17894145-3bdc-4be8-93d7-a1c77e08b1e9","","We aimed to compare the results of radical nephrectomy (RN) and nephron sparing surgery (NSS) in renal cell carcinomas of less than 7 cm. We performed a retrospective chart review of cases who underwent RN (n=41) and NSS (n=34) in our clinic between 1997-2003. The average ages of cases with RN and NSS were 58.31Â±11.42 ve 55.32Â±12.18 years, respectively. Tumor recurrence and complication rates, duration of hospitalization, change in creatinine levels and 3 year survival analysis were calculated and compared. The amount of bleeding was significantly more in NSS group (p<0.001) but no difference was observed between the groups considering plevral damage (p: 0.511). Urinary fistula developed in 2 patients in NSS (5.9%) were repaired by placing a retrograde double-J catheter. Postoperative creatinine level was found to increase significantly in RN group (p<0.001) but no significant change observed in NSS group (p: 0.355). Three year survival rates were not different between the RN (97.30%) and NSS (96.67%) groups (p: 0.872). In conclusion, survival rates of RN and NSS in renal masses less than 7cm were similar. Renal functions were better reserved while complications were more frequent in the group with NSS than RN.","","","RefMan","","","","","","","","","",""
"Unknown","Unknown","Unknown","Unknown","","","2010","Balbuena, P., Li, W., Magnin-

Bissel, G., Meldrum, J. B., Ehrich, M.","Comparison of two blood-brain barrier in vitro systems: cytotoxicity and transfer assessments of malathion/oxon and lead acetate","Toxicological sciences : an official journal of the Society of Toxicology","114(2):260-71","328e3cc3-2a39-4e60-8cfd-37995f5ac5f8","","Toxicity and integrity disruption in response to transport through the blood-brain barrier (BBB) of the organophosphates malathion and malaoxon and heavy metal lead acetate were assessed in two in vitro barrier systems. One system was constructed using bovine brain microvascular endothelial cells (BMEC), while the other system was constructed with rat brain microvascular endothelial cells (RBE4); both were cocultured with rat astrocytes. We hypothesized that these models would respond differently to neurotoxic compounds. Concentrations of malathion, malaoxon, and lead acetate between 0.01 microM and 1 mM were assessed for their capacity to cause cytotoxicity to the astrocytes and endothelial cells utilized to construct the BBB systems, with the least cytotoxic concentrations chosen for transfer assessments of neurotoxicants through the barrier systems. Concentrations of malathion at 10 microM, malaoxon at 1 microM, and lead acetate at 1 and 10 microM were selected. Lead concentrations were measured in media of the abluminal and luminal sides of both systems using graphite furnace atomic absorption at the beginning of the treatment (T0) and 14 h later (T14). Passage of organophosphate compounds was determined utilizing inhibition of acetylcholinesterase enzyme in a neuroblastoma cell line (SH-SY5Y) localized below the barrier system. Transendothelial electrical resistance was assessed as a measurement of integrity of the barrier systems, with baseline values higher with the RBE4-astrocyte system than with the BMEC-astrocyte system. Metabolic capability, as measured by esterase activity, was higher in BMECs, which were more likely to retain lead than RBE4 cells. Results suggest that differences in endothelial cell source can affect the outcome of studies on toxicant transfer through in vitro BBB systems.","","","RefMan","","","","","","","","","","Unknown","Unknown","Unknown","Unknown","","","1996","Rodgers, K., Xiong, S.","Contribution of mast cell mediators to alterations in macrophage function after malathion administration","Fundamental and applied toxicology : official journal of the Society of Toxicology","33(1):100-8","c5bb1fe1-2632-40e4-9063-bef4acfdcbb3","","Previous studies showed that acute administration of noncholinergic doses of malathion increased macrophage function and the generation of a primary humoral immune response to a T-dependent antigen and caused mast cell degranulation. Recent studies using mast cell-deficient mice showed that the presence of mast cells was necessary for the increase in macrophage function observed after oral administration of malathion, and reconstitution with bone marrow-derived mast cells restored the ability of malathion to increase macrophage function. In the present study, the contribution of mast cell mediators to alterations in macrophage function after oral administration of malathion was examined. Controls in this study included the effect of the agent to be examined on resident peritoneal macrophages and macrophages elicited with pristane, an agent that can stimulate macrophages in the absence of mast cells. Coadministration of intraperitoneal cromolyn, a stabilizer of mast cell membranes, with oral malathion blocked the ability of malathion to increase macrophage function as measured by the generation of respiratory burst activity, the phagocytosis of opsonized yeast, and the production of cathepsin D. On the other hand, administration of cromolyn to mice whose macrophage function was stimulated with pristane did not affect the observed increases in macrophage function. As oral

administration of malathion caused histamine release, the ability of a histamine receptor antagonist, pyrilamine, to alter the response of peritoneal macrophages to oral administration of malathion was also examined. Intraperitoneal administration of pyrilamine partially blocked the effects of oral administration of malathion on peritoneal macrophage function, but did not affect the function of resident or pristane-elicited peritoneal macrophages. These data suggest that mediators from mast cells contribute to the elevation in macrophage function observed after oral malathion administration.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","1997","Rodgers, K., Xiong, S.","Contributions of inflammatory mast cell mediators to alterations in macrophage function after malathion administration","International journal of immunopharmacology","19(3):149-56","e8fb0f5c-f0c2-4e86-98e5-835476c58fe5","","Recent studies using mast cell-defined mice showed that the presence of mast cells was necessary for the increase in macrophage function observed after oral administration of malathion and reconstitution with bone marrow-derived mast cells restored the ability of malathion to increase macrophage function. In addition, the release of mast cell mediators (blocked by cromolyn) and histamine (action blocked by pyrilamine) was shown to be involved in the action of malathion on macrophage function. In the present study, the contribution of inflammatory mediators (i.e. arachidonic acid metabolites and tumor necrosis factor [TNF]) which may be generated by mast cells after oral administration of malathion, was examined. Controls in this study included the effects of the agent to be examined on: (1) resident peritoneal macrophages; and (2) macrophages elicited with pristane, and agent shown previously to stimulate macrophage function in the absence of mast cells. Intraperitoneal administration of indomethacin, and inhibitor of cycloxygenase, or neutralizing antibody to TNF 30 h before and 4 h after oral malathion blocked the ability of malathion to increase macrophage function, as measured by the generation of respiratory burst activity and the production of cathepsin D. On the other hand, administration of these agents to mice injected intraperitoneally with pristane did not affect the observed increase in cathepsin D production. Respiratory burst function after elicitation with pristane was slightly decreased (indomethacin) or not affected (antibody to TNF). The effect of intraperitoneal administration of nordihydroguaiaretic acid (NDGA), and inhibitor of both cycloxygenase and lipoxygenase, was also examined. Intraperitoneal administration of NDGA partially blocked the effects of oral administration of malathion on peritoneal macrophage function, but did not affect the function of resident pristane-elicited peritoneal macrophages. These data suggest that inflammatory mediators (potentially released from mast cells upon stimulation) contribute to the elevation in macrophage function observed after oral malathion administration.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2011","Boobis, A., Budinsky, R., Collie, S., Crofton, K., Embry, M., Felter, S., Hertzberg, R., Kopp, D., Mihlan, G., Mumtaz, M., Price, P., Solomon, K., Teuschler, L., Yang, R., Zaleski, R.","Critical analysis of literature on low-dose synergy for use in screening chemical mixtures for risk assessment","","41(5):369-383","b1f39a9b-d8b4-41f6-911b-8141dbef1631","","There is increasing interest in the use of tiered approaches in risk assessment of mixtures or co-exposures to chemicals for prioritization. One possible screening-level risk assessment approach is the threshold of toxicological concern (TTC). To date, default assumptions of dose or response additivity have been used to characterize the toxicity of chemical mixtures. Before a screening-level approach could be used, it is essential

to know whether synergistic interactions can occur at low, environmentally relevant exposure levels. Studies demonstrating synergism in mammalian test systems were identified from the literature, with emphasis on studies performed at doses close to the points of departure (PODs) for individual chemicals. This search identified 90 studies on mixtures. Few included quantitative estimates of low-dose synergy; calculations of the magnitude of interaction were included in only 11 papers. Quantitative methodology varied across studies in terms of the null hypothesis, response measured, POD used to test for synergy, and consideration of the slope of the dose-response curve. It was concluded that consistent approaches should be applied for quantification of synergy, including that synergy be defined in terms of departure from dose additivity; uniform procedures be developed for assessing synergy at low exposures; and the method for determining the POD for calculating synergy be standardized. After evaluation of the six studies that provided useful quantitative estimates of synergy, the magnitude of synergy at low doses did not exceed the levels predicted by additive models by more than a factor of 4. Â© 2011 Informa Healthcare USA, Inc.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2013","Kjeldsen, L. S., Ghisari, M., Bonefeld-Jorgensen, E. C.","Currently used pesticides and their mixtures affect the function of sex hormone receptors and aromatase enzyme activity","Toxicology and applied pharmacology","272(2):453-64","d34fc8c7-a599-42de-9db8-3ad28a306e70","","The endocrine-disrupting potential of pesticides is of health concern, since they are found ubiquitously in the environment and in food items. We investigated in vitro effects on estrogen receptor (ER) and androgen receptor (AR) transactivity, and aromatase enzyme activity, of the following pesticides: 2-methyl-4-chlorophenoxyacetic acid (MCPA), terbuthylazine, iodosulfuron-methyl-sodium, mesosulfuron-methyl, metsulfuron-methyl, chlormequat chloride, bitertanol, propiconazole, prothioconazole, mancozeb, cypermethrin, tau fluvalinate, malathion and the metabolite ethylene thiourea (ETU). The pesticides were analyzed alone and in selected mixtures. Effects of the pesticides on ER and AR function were assessed in human breast carcinoma MVLN cells and hamster ovary CHO-K1 cells, respectively, using luciferase reporter gene assays. Effects on aromatase enzyme activity were analyzed in human choriocarcinoma JEG-3 cells, employing the classical [(3)H](2)O method. Five pesticides (terbuthylazine, propiconazole, prothioconazole, cypermethrin and malathion) weakly induced the ER transactivity, and three pesticides (bitertanol, propiconazole and mancozeb) antagonized the AR activity in a concentration-dependent manner. Three pesticides (terbuthylazine, propiconazole and prothioconazole) weakly induced the aromatase activity. In addition, two mixtures, consisting of three pesticides (bitertanol, propiconazole, cypermethrin) and five pesticides (terbuthylazine, bitertanol, propiconazole, cypermethrin, malathion), respectively, induced the ER transactivity and aromatase activity, and additively antagonized the AR transactivity. In conclusion, our data suggest that currently used pesticides possess endocrine-disrupting potential in vitro which can be mediated via ER, AR and aromatase activities. The observed mixture effects emphasize the importance of considering the combined action of pesticides in order to assure proper estimations of related health effect risks.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2011","Keller, E. C., Tomecki, K. J.","Cutaneous infections and infestations new therapies","","4(12):18-24","441d9c3a-a965-4a32-9531-413139402dc1","","Directed and preventive therapies for cutaneous infectious disease and infestation continue to evolve, providing physicians with new

options for care. Common infectious diseases (e.g., genital herpes, herpes zoster, and head lice) occur in the outpatient and inpatient setting. This review of the literature highlights new therapies, including those still in development, such as novel drugs and vaccines, all of which should help to decrease the frequency and severity of common infectious diseases of the skin and subcutaneous tissues.","","","RefMan","","","","","","","","","",""

"Unknown","Unknown","Unknown","Unknown","","","1996","Amer, S. M., Fahmy, M. A., Donya, S. M.","Cytogenetic effect of some insecticides in mouse spleen","Journal of applied toxicology : JAT","16(1):1-3","45de06de-c1f0-45be-833d-8c09133365d4","","Several insecticides were tested for their ability to induce chromosomal aberrations in mouse spleen. They were injected i.p. in doses representing approximately 1/8-1/10 of the respective LD50 values. Doses were: DDT, 5.5 mg kg-1 body wt.; malathion, 30 mg kg-1 body wt.; Dursban, 4 mg kg-1 body wt.; Sevin, 7 mg kg-1 body wt.; and Lannate, 1 mg kg-1 body wt. 'Mitomycin C' at a dose of 1 mg kg-1 body wt. was used as a positive control. Mice were sacrificed 6, 24 and 48 h after treatment. DDT, malathion, dursban and lannate caused maximum chromosomal aberrations 24 h after injection, whereas Sevin induced its maximum effect 6 h after the treatment. All the insecticides induced statistically significant chromosomal aberrations even after excluding the number of metaphases with gaps. The results indicate genotoxicity in mouse spleen cells.","","","RefMan","","","","","","","","","",""

"Unknown","Unknown","Unknown","Unknown","","","2012","Lu, X. T., Ma, Y., Wang, C., Zhang, X. F., Jin da, Q., Huang, C. J.","Cytotoxicity and DNA damage of five organophosphorus pesticides mediated by oxidative stress in PC12 cells and protection by vitamin E","Journal of environmental science and health. Part. B, Pesticides, food contaminants, and agricultural wastes","47(5):445-54","2e594cc9-42ac-4ec9-a603-925af45c5b17","","Previous studies have demonstrated that pesticides could induce cytotoxicity and genotoxicity in vivo and in vitro, and that oxidative stress may be an important factor involved. However, investigations comparing the capability of different organophosphorous (OP) compounds to induce cytotoxicity, genotoxicity and oxidative stress are limited. Hence, the aim of this paper was to access the cytotoxic and genotoxic effects of five OPs or metabolites, Acephate (ACE), Methamidophos (MET), Chloramidophos (CHL), Malathion (MAT) and Malaoxon (MAO), and to clarify the role of oxidative stress, using PC12 cells. The results demonstrated that MET, MAT and MAO caused significant inhibition of cell viability and increased DNA damage in PC12 cells at 40 mg L(-1). MAO was more toxic than the other OPs. ACE, MET, MAT and MAO increased the levels of intracellular reactive oxygen species (ROS) and malondialdehyde (MDA), and decreased the activity of superoxide dismutase (SOD), catalase (CAT) and glutathione (GSH) at 20 mg L(-1) and 40 mg L(-1) to different degrees. Pre-treatment with vitamin E(600 muM)caused a significant attenuation in the cytotoxic and genotoxic effect; pre-treatment reversed subsequent OP-induced elevation of peroxidation products and the decline of anti-oxidant enzyme activities. These results indicate that oxidative damage is likely to be an initiating event that contributes to the OP-induced cytotoxicity.","","","RefMan","","","","","","","","","",""

"Unknown","Unknown","Unknown","Unknown","","","2000","Dierickx, P. J.","Cytotoxicity of the MEIC reference chemicals in rat hepatoma-derived Fa32 cells","Toxicology","150(1-3):159-69","ac4b8ced-c356-44d8-a94d-bd9843ae6626","","The cytotoxicity of the MEIC reference chemicals was investigated in rat hepatoma-derived Fa32 cells. The total protein content was measured as an endpoint after exposure times of 30 min and 24 h,

both in normal and glutathione-depleted cells. The neutral red uptake inhibition and the MTT conversion were also measured after 30 min. On average, the cytotoxicity was higher in glutathione-depleted cells when compared to normal cells, and was lower after 30 min than after 24 h. Evidence was obtained for lysosomal attack (of five chemicals) or mitochondrial dysfunction (of six chemicals) as the primary intoxication mechanism. Malathion and mercuric chloride belong to both series of chemicals. Good to excellent correlations were observed when the 50% inhibitory concentrations of the six different in vitro assays were compared. When the six in vitro assays in Fa32 cells were compared with the human toxicity, the correlation coefficient was almost always identical to that obtained previously in human hepatoma-derived Hep G2 cells. The latter was the best acute in vitro assay for the prediction of human toxicity within the MEIC study. Altogether the results integrate very well with the basal cytotoxicity concept (Ekwall, B., 1995. The basal cytotoxicity concept. In: Goldberg, A.M., Van Zutphen, L.F.M. (Eds.), The World Congress on Alternatives and Animal Use in the Life Sciences: Education, Research, Testing. Mary Ann Liebert Publishers, New York, pp. 721-725).","","","RefMan","","","","","","","","","",""

"Unknown","Unknown","Unknown","Unknown","","","2011","McCollum, C. W., Ducharme, N. A., Bondesson, M., Gustafsson, J. A.","Developmental toxicity screening in zebrafish","","93(2):67-114","14fff047-0714-47d7-aaac-4ec126409d9b","","Given the ever-increasing toxic exposure ubiquitously present in our environment as well as emerging evidence that these exposures are hazardous to human health, the current rodent-based regulations are proving inadequate. In the process of overhauling risk assessment methodology, a nonrodent test organism, the zebrafish, is emerging as tractable for medium- and high-throughput assessments, which may help to accelerate the restructuring of standards. Zebrafish have high developmental similarity to mammals in most aspects of embryo development, including early embryonic processes, and on cardiovascular, somite, muscular, skeletal, and neuronal systems. Here, we briefly describe the development of these systems and then chronicle the toxic impacts assessed following chemical exposure. We also compare the available data in zebrafish toxicity assays with two databases containing mammalian toxicity data. Finally, we identify gaps in our collective knowledge that are ripe for future studies. Â© 2011 Wiley-Liss, Inc.","","","RefMan","","","","","","","","","",""

"Unknown","Unknown","Unknown","Unknown","","","2005","Gwinn, M. R., Whipkey, D. L., Tennant, L. B., Weston, A.","Differential gene expression in normal human mammary epithelial cells treated with malathion monitored by DNA microarrays","Environmental health perspectives","113(8):1046-51","702fb5cc-084c-4e75-b101-1fdd9d06808d","","Organophosphate pesticides are a major source of occupational exposure in the United States. Moreover, malathion has been sprayed over major urban populations in an effort to control mosquitoes carrying West Nile virus. Previous research, reviewed by the U.S. Environmental Protection Agency, on the genotoxicity and carcinogenicity of malathion has been inconclusive, although malathion is a known endocrine disruptor. Here, interindividual variations and commonality of gene expression signatures have been studied in normal human mammary epithelial cells from four women undergoing reduction mammoplasty. The cell strains were obtained from the discarded tissues through the Cooperative Human Tissue Network (sponsors: National Cancer Institute and National Disease Research Interchange). Interindividual variation of gene expression patterns in response to malathion was observed in various clustering patterns for the four cell strains. Further clustering identified three genes with

increased expression after treatment in all four cell strains. These genes were two aldo-keto reductases (AKR1C1 and AKR1C2) and an estrogen-responsive gene (EBBP). Decreased expression of six RNA species was seen at various time points in all cell strains analyzed: plasminogen activator (PLAT), centromere protein F (CPF), replication factor C (RFC3), thymidylate synthetase (TYMS), a putative mitotic checkpoint kinase (BUB1), and a gene of unknown function (GenBank accession no. AI859865). Expression changes in all these genes, detected by DNA microarrays, have been verified by real-time polymerase chain reaction. Differential changes in expression of these genes may yield biomarkers that provide insight into interindividual variation in malathion toxicity.","","","RefMan","","","","","","","","","",""
"Unknown","Unknown","Unknown","Unknown","","","2009","Feldmeier, H.","Dimeticone preparations for the treatment of head lice infestation","","149(6):87-95","78a6acae-0813-4146-b1f0-b8058dfde4a3","","","","","RefMan","","","","","","","","","",""
"Unknown","Unknown","Unknown","Unknown","","","2008","Chromik, A. M., Janot, M., SÃ¼lberg, D., Seelig, M. H., Uhl, W.","Distal pancreatectomy: RRRRadical or spleen-preserving?","","79(12):1123-1133","5b9990f2-a7b0-4303-8868-86b2ba18112f","","During recent years, spleen-preserving distal pancreatectomy (SPDP) has broadened the operative spectrum in pancreatic surgery. The rationale for spleen-preserving procedures comprises prevention of overwhelming postsplenectomy infection syndrome (OPSI) and possibly an advantage regarding reduced carcinogenesis. Although there are no prospective randomized trials, SPDP and distal pancreatectomy with splenectomy (DPSx) seem to be equivalent in terms of blood loss, operative time, mortality and frequency of reoperation. Concerning pancreatic fistulas and other major surgical complications, current data from the literature are conflicting. Long-term effects of SPDP, such as development of gastric varices due to portal hypertension, are still insufficiently investigated. However, SPDP should always be considered in patients with benign tumors of the pancreatic tail and chronic pancreatitis. Spleen-preserving distal pancreatectomy can also be combined with resection of the splenic vessels (DPSx-SVx) if the blood supply of the spleen via the small gastric vessels and the gastro-epoploic arcade is sufficient. In the presence of malignant tumors, DPSx is necessary for oncological reasons. Â© 2008 Springer Medizin Verlag.","","","RefMan","","","","","","","","","",""
"Unknown","Unknown","Unknown","Unknown","","","2008","Reus, G. Z., Valvassori, S. S., Nuernberg, H., Comim, C. M., Stringari, R. B., Padilha, P. T., Leffa, D. D., Tavares, P., Dagostim, G., Paula, M. M., Andrade, V. M., Quevedo, J.","DNA damage after acute and chronic treatment with malathion in rats","Journal of agricultural and food chemistry","56(16):7560-5","0068d9a9-87d1-4187-80cf-0afe3ec152bd","","Malathion is an insecticide widely used in agriculture and in public health programs that when used indiscriminately in large amounts can cause environmental pollution and risk to human health. However, it is possible that during the metabolism of malathion, reactive oxygen species can be generated, and malathion may produce oxidative stress in intoxicated rats that can be responsible for alterations in DNA molecules related in some studies. As a result, the present study aimed to investigate the DNA damage of cerebral tissue and peripheral blood in rats after acute and chronic malathion exposure. We used single cell gel electrophoresis (Comet assay) to measure early damage in hippocampus and peripheral blood and the Micronucleus test in total erythrocytes samples. Malathion was administered intraperitoneally once a day for one day (acute) or for 28 days (chronic) protocols (in both protocols, malathion was administered at 25,

50, 100, and 150 mg/kg). Our results showed that malathion (100 and 150 mg/kg) increased the DNA damage index in the peripheral blood and in the hippocampus after both chronic and acute treatment. Malathion increased the frequency of micronuclei only in chronic treatment at 150 mg/kg dose, and induced a cytotoxic dose-dependent decrease in the frequency of polychromatic erythrocytes in the peripheral blood of rats. In conclusion, since malathion increased both the peripheral blood and hippocampus DNA damage index using the Comet assay and increased the frequency of micronuclei in the total peripheral blood, it can be regarded as a potential mutagen/carcinogenic agent.","","","RefMan","","","","","","","","","",""
"Unknown","Unknown","Unknown","Unknown","","","2012","Zhang, X., Wallace, A. D., Du, P., Kibbe, W. A., Jafari, N., Xie, H., Lin, S., Baccarelli, A., Soares, M. B., Hou, L.","DNA methylation alterations in response to pesticide exposure in vitro","","53(7):542-549","333c7bb1-28d3-4cfb-8451-6fc7ce59cfef","","Although pesticides are subject to extensive carcinogenicity testing before regulatory approval, pesticide exposure has repeatedly been associated with various cancers. This suggests that pesticides may cause cancer via nonmutagenicity mechanisms. The present study provides evidence to support the hypothesis that pesticide-induced cancer may be mediated in part by epigenetic mechanisms. We examined whether exposure to seven commonly used pesticides (i.e., fonofos, parathion, terbufos, chlorpyrifos, diazinon, malathion, and phorate) induces DNA methylation alterations in vitro. We conducted genome-wide DNA methylation analyses on DNA samples obtained from the human hematopoietic K562 cell line exposed to ethanol (control) and several organophosphate pesticides (OPs) using the Illumina Infinium HumanMethylation27 BeadChip. Bayesian-adjusted t-tests were used to identify differentially methylated gene promoter CpG sites. In this report, we present our results on three pesticides (fonofos, parathion, and terbufos) that clustered together based on principle component analysis and hierarchical clustering. These three pesticides induced similar methylation changes in the promoter regions of 712 genes, while also exhibiting their own OP-specific methylation alterations. Functional analysis of methylation changes specific to each OP, or common to all three OPs, revealed that differential methylation was associated with numerous genes that are involved in carcinogenesis-related processes. Our results provide experimental evidence that pesticides may modify gene promoter DNA methylation levels, suggesting that epigenetic mechanisms may contribute to pesticide-induced carcinogenesis. Further studies in other cell types and human samples are required, as well as determining the impact of these methylation changes on gene expression. Â© 2012 Wiley Periodicals, Inc.","","","RefMan","","","","","","","","","",""
"Unknown","Unknown","Unknown","Unknown","","","2007","","Does dimeticone clear head lice?","","45(7):52-55","978eaf1a-ffc6-4040-b28b-ca81bb2e6309","","Head lice infestation is common and mainly affects children of primary school age. Treatments include licensed topical preparations containing conventional chemical insecticides and medical devices. Each of these fail to eradicate head lice in some patients and resistance is a problem with chemical insecticides. Dimeticone 4% lotion (Hedrin - Thornton & Ross) is a new treatment licensed ""for the eradication of head lice infestations"". Here we consider its place in the context of other options.","","","RefMan","","","","","","","","","",""
"Unknown","Unknown","Unknown","Unknown","","","2011","Galantai, R., Emody-Kiss, B., Somosy, Z., Bognar, G., Horvath, G., Forgacs, Z., Gachalyi, A., Szilasi, M.","Does malaoxon play a role in the geno- and cytotoxic effects of malathion on human

choriocarcinoma cells?","Journal of environmental science and health. Part. B, Pesticides, food contaminants, and agricultural wastes","46(8):773-9","f4322c39-feb5-4ff8-b7dd-170733e4f6ae","","This investigation was undertaken to elucidate whether the active metabolite of malathion, malaoxon, has any role in exerting cyto- and genotoxic effects for human choriocarcinoma (JAR) cell line which is an acceptable model for human placental cells. Gas chromatography-mass spectrometry (GC-MS) analysis were separately performed on the cell compartment and supernatant cell culture medium after subjecting the cell line to different malathion concentrations (10-400 mug/mL) and for various incubation periods (0.5 to 24 hours). GC-MS analysis showed that the sonication performed for the disruption of the cells did not cause the chemical change of malathion. The uptake of malathion by the cells was relatively fast. However, the presence of malaoxon, even in trace amounts, could not be confirmed either in samples originating from disrupted cells or in the cell culture medium. Although the hydrolysis of malaoxon occurred in the culture medium, this degradation process could not be counted as a reason for the absence of malaoxon. Since both malathion and malaoxon standard compounds could be accurately detected and distinguished by the applied liquid-liquid extraction and GC-MS methods, one can conclude that, in the case of JAR cells, the parent compound, (i.e. malathion itself) is responsible for the observed in vitro cyto- and genotoxic effects. Our results indicate that the direct toxicity of malathion contributes to the complications of pregnancy observed for environmental malathion exposure.","","","RefMan","","","","","","","","","","Unknown","Unknown","Unknown","Unknown","","","2010","Autret-Leca, E.","Drugs news","","17(11):1596-1603","154a76a0-9b77-429d-afbf-62af5f8face2","","","","","RefMan","","","","","","","","","","Unknown","Unknown","Unknown","Unknown","","","2009","RÃ¸der, M. A., Gruschy, L., Brasso, K., Iversen, P.","Early complications following open radical prostatectomy","","171(18):1492-1496","de50eab5-31d2-4430-aa38-8acf1cebad13","","INTRODUCTION: Radical prostatectomy has been offered as curative treatment for localized prostate cancer at Rigshospitalet since August 1995. We here report on postoperative complications in 719 patients operated during the 12-year-period from August 1995 to August 2007 with special emphasis on developments over time. MATERIAL AND METHODS: A retrospective review. RESULTS: Median age at surgery was 63 years with a significant increase from 61 to 64 during the 12-year-period. We found no change in clinical preoperative T-category, whereas the median pre-treatment PSA decreased significantly. This reflects increased surgical experience and an optimized postoperative course. Significant reductions in operating time, need for blood transfusions, and length of hospitalisation were recorded. One or more complications were registered in 164 patients (22.8%); severe complications occurred in eight patients (1,1%). One patient died within 30 days after surgery. CONCLUSION: Our results demonstrate that radical prostatectomy can be performed with a minimal mortality and an acceptable morbidity.","","","RefMan","","","","","","","","","","Unknown","Unknown","Unknown","Unknown","","","2010","Li, G., Zhou, Z., Gold, M. H.","Eczematous dermatitis after vascular laser therapy: A report of two cases","","12(2):112-115","8c2fdc00-2839-470d-8d2e-14906e733673","","Eczematous dermatitis was found in two port wine stain (PWS) lesions in two different individuals following variable pulsed 532-nm laser therapy. Both of the individuals described in this report had received low-dose superficial X-ray several years prior to the development of the eczematous dermatitis. The eczematous dermatitis in the PWS lesions

was characterized by oozing, crusting, and pruritus, which showed a tendency to expand to other sites when exacerbated. Treatment with topical corticosteroid ointments produced some temporary improvement, but the dermatitis in both cases recurred when the topical medications were stopped. The mechanism of action for the development of an eczematous dermatitis in a PWS remains unclear, but may be related to multiple factors including abnormal hemodynamic forces resulting from the malformed vessels, an abnormal production of cytokines, local pathophysiological and immunological changes resulting from either the X-ray therapy or the laser therapy, and atopic constitution inherent in these individuals. These hypotheses and ideas need further study for additional insight into this rare, but reported adverse event. Â© 2010 Informa UK Ltd.","","","RefMan","","","","","","","","","",""
"Unknown","Unknown","Unknown","Unknown","","","2003","Ishihara, A., Nishiyama, N., Sugiyama, S., Yamauchi, K.","The effect of endocrine disrupting chemicals on thyroid hormone binding to Japanese quail transthyretin and thyroid hormone receptor","General and comparative endocrinology","134(1):36-43","570ea0e5-7751-4f77-8cc3-19fedce899b2","","We investigated the effect of endocrine disrupting chemicals (EDCs), including medical, industrial, and agricultural chemicals, on 3,3',5-L-[125I]triiodothyronine ([125I]T3) binding to purified Japanese quail transthyretin (qTTR), a major thyroid hormone-binding protein in plasma, and to the ligand-binding domain of thyroid hormone receptor beta (qTR LBD). Scatchard plots of T3 binding to qTTR and qTR LBD revealed two classes of binding sites, with Kd values of 6.9 and 185 nM, and a single class of binding sites, with Kd value of 0.31 nM, respectively. Among the test chemicals, diethylstilbestrol was the most powerful inhibitor of [125I]T3 binding to qTTR (IC50 < 0.4 nM). Diethylstilbestrol, ioxynil (IC50 =1.1+/-0.5 nM) and pentachlorophenol (IC50 = 6.3+/-3.8 nM) displaced [125I]T3 from qTTR more effectively than unlabeled T3 (IC50 = 9.7+/-0.9 nM) did. Although malathion, 4-nonylphenol, bisphenol A and n-butylbenzyl phthalate were effective inhibitors of [125I]T3 binding to qTTR, their potency was two orders of magnitude less than that of T3. All test chemicals except for diethylstilbestrol had either a weak or no effect on [125I]T3 binding to qTR LBD. These results show that several EDCs tested in this study target qTTR rather than qTR LBD.","","","RefMan","","","","","","","","","",""
"Unknown","Unknown","Unknown","Unknown","","","2011","Mnif, W., Hassine, A. I. H., Bouaziz, A., Bartegi, A., Thomas, O., Roig, B.","Effect of endocrine disruptor pesticides: A review","","8(6):2265-2303","e7da34e0-e75a-4fa5-9412-3ecfdb73c753","","Endocrine disrupting chemicals (EDC) are compounds that alter the normal functioning of the endocrine system of both wildlife and humans. A huge number of chemicals have been identified as endocrine disruptors, among them several pesticides. Pesticides are used to kill unwanted organisms in crops, public areas, homes and gardens, and parasites in medicine. Human are exposed to pesticides due to their occupations or through dietary and environmental exposure (water, soil, air). For several years, there have been enquiries about the impact of environmental factors on the occurrence of human pathologies. This paper reviews the current knowledge of the potential impacts of endocrine disruptor pesticides on human health. Â© 2011 by the authors; licensee MDPI, Basel, Switzerland.","","","RefMan","","","","","","","","","",""
"Unknown","Unknown","Unknown","Unknown","","","2003","Ayub, S., Verma, J., Das, N.","Effect of endosulfan and malathion on lipid peroxidation, nitrite and TNF-alpha release by rat peritoneal macrophages","International immunopharmacology","3(13-14):1819-28","cce3b238-584d-4b75-8112-5177adf41902","","Endosulfan and malathion are

organochlorine and organophosphate insecticides, respectively. The toxicity of both the insecticides are well known on non-target organisms. Both endosulfan and malathion are reported to suppress humoral as well as cellular immune responses. We investigated the possible effect of both these insecticides on lipid peroxidation, nitrite production and TNF-alpha generation in rat peritoneal macrophages under in vitro conditions. Rat peritoneal cells were collected and cultured with or without insecticides and relevant stimulants for lipid peroxidation, generation of nitric oxide and TNF-alpha. FeSO(4) was used as an inducer for lipid peroxidation and LPS was used to induce nitric oxide synthase and release of TNF-alpha. Lipid peroxidation was assayed by estimating MDA; nitric oxide was determined by estimating nitrite and TNF-alpha by using an assay kit in culture supernatants. Both endosulfan and malathion had no effect on lipid peroxidation. Endosulfan did not have any influence on nitrite production, but suppressed the LPS-induced TNF-alpha generation. Malathion, however, showed a direct suppression on nitrite production and suppression of LPS-induced TNF-alpha generation. This study suggests that functional aberrations of macrophages may contribute significantly to the immunomodulation reported for these insecticides.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2012","Navarrete-Meneses, P., Betancourt, M., Bonilla, E., Altamirano, M., Reyes, A., PÃ©rez-Vera, P.","Effect of insecticide exposure in the generation of alterations in MLL: A gene associated with acute lymphoblastic leukemia","","53:S59","c3ea8e3b-562f-43d0-8353-0ab93dfc1e3f","","Introduction: Acute lymphoblastic leukemia (ALL) is the most common childhood cancer. It is characterized by the presence of numerical and structural chromosomal abnormalities. Translocations involving MLL gene are detected in 80% of patients under one year old; it is proposed they arise in utero. Development of ALL and the uterine exposure to pesticides have been reported in numerous epidemiological studies; however, there is limited biological evidence supporting this association. The aim of this study was to detect alterations in MLL gene induced by two extensively used insecticides, permethrin and malathion, in human lymphocytes in vitro. Method: Lymphocytes from a healthy volunteer were cultured for 72h. Chemical grade permethrin/malathion were added (100-300Î¼M) for the last 24h. Etoposide and insecticides solvents were used as positive and negative controls, respectively. Alterations in MLL gene were analyzed by FISH. Results: Both pesticides showed increased percentage of cells with numerical and structural alterations, compared to negative controls; the highest percentage of damage was detected with permethrin treatment. Even though damage was found in all samples, more complex abnormalities were observed in the cells treated with pesticides. Discussion: Numerical alterations, not previously reported, were detected using these insecticides. Some of the structural alterations found in this study have been observed in cells exposed to etoposide. Direct damage found in MLL gene using permethrin/malathion resembles the effect described for etoposide, a well-known leukemogenic agent.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2003","Masoud, L., Vijayasarathy, C., Fernandez-Cabezudo, M., Petroianu, G., Saleh, A. M.","Effect of malathion on apoptosis of murine L929 fibroblasts: a possible mechanism for toxicity in low dose exposure","Toxicology","185(1-2):89-102","a0d57085-850a-4f33-8bb6-755fdae59591","","While acute organophosphorous compound poisoning due to inhibition of acetylcholinesterase is a well-established clinical entity, the existence of chronic

poisoning due to exposure to low levels of organophosphorous compounds (below the threshold required for cholinergic clinical symptoms) is a hotly debated issue. In this study, we have evaluated the effects of noncholinergic doses of malathion (0.01-20 microM) on apoptosis of murine L929 fibroblasts. Employing flow cytometric and caspase activation analyses we demonstrate that malathion induces apoptosis in L929 cells in a dose- and time-dependent manner. The initiator caspases (caspase-8 and caspase-9) as well as the effector caspase (caspase-3) were activated by the treatment of L929 cells with malathion. Exposure of L929 cells to malathion in the presence of a general inhibitor of caspase, z-VAD-FMK abolished the apoptotic effect of the compound. In addition, malathion induced an increase in the expression of the pro-apoptotic protein p53. However, the induction of p53 expression was subsequent to activation of the caspase cascades. The present findings suggest, that the cytotoxicity of malathion at noncholinergic doses is mediated through caspase-dependent apoptosis.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","1999","Munshi, J. D., Dutta, H. M., Singh, N. K., Roy, P. K., Adhikari, S., Dogra, J. V., Ali, M. M.","Effect of malathion, an organophosphorus pesticide, on the serum proteins of Heteropneustes fossilis (BLOCH)","Journal of environmental pathology, toxicology and oncology : official organ of the International Society for Environmental Toxicology and Cancer","18(1):79-83","9adece31-327b-4d5c-b3a9-afb53edb1e39","","The use of pesticides to control pests and to increase food production is a normal process in this modern age. The objective of this study was to determine changes in different serum protein fractions caused by the action of malathion, a commonly used pesticide. We used Indian catfish, Heteropneustes fossilis. The fish were exposed to a sublethal dose of 4 mg/L of malathion for 24, 48, 72, and 96 hr. The LC50 value at 96 hr was found to be 11.676 mg/L. The results showed the formation of three low and four high mobility fractions and the disappearance of some protein fractions at different periods of exposure. The appearance of fractions A, B, and C (low-mobility proteins) may be due to altered immune responses caused by cellular damage. The appearance of new high-mobility fractions (D, E, F, and G) is possibly due to the breakdown of red blood cells and other cellular components. The findings of this study indicate that the high concentration of malathion (4 mg/L) induced more alterations in serum proteins compared with the low concentration (1.2 mg/L) used in our previous study.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2010","Ã-zaslan, C., Yilmaz, K. B., DoÇ§an, L., Atalay, C., Altinok, M.","Effect of mechanical closure of dead space on seroma formation in modified radical mastectomy","","40(5):751-755","b27496f9-4d92-4de1-927d-c8dcb6141a66","","Aim: Seroma is an important complication of breast surgery. This study investigated the effects of fixation of the flaps and obliterating the dead space on seroma formation. Materials and methods: Patients undergoing modified radical mastectomy were separated into 2 random groups of 50 according to wound closure methods: either flap fixation/mechanical obliteration or standard wound closure group. The fluid that collected under the flaps assessed at the physical examination after the drains were removed was accepted as seroma. The patients' characteristics, duration of the operation, drainage amount, removal time of the drains, flap necroses, and infection were recorded. The groups were compared via chi-square and Levene tests. Significance was determined for P â‰¤ 0.05. Results: In both groups, characteristics and complication rates were similar. The seroma rates in the first and second groups

were 12 (24%) and 6 (12%), respectively (P < 0.05). The average time for the removal of the drains was 6.7 Â± 2.6 days in the first group and 5.6 Â± 1.7 days in the second (P = 0.012). The average amount of drainage was 873 Â± 513 and 630 Â± 271 mL for the first and second groups, respectively (P = 0.02). Conclusion: Mechanical closure between subcutaneous tissue and pectoral muscle with stitches at the incision may decrease the amount of drainage and contribute to early removal of the drains. Â© TÃœBÄ°TAK.","","","RefMan","","","","","","","","","","Unknown","Unknown","Unknown","Unknown","","","2012","Oksay, T., ErgÃ¼n, O., Burak HoÅŸcan, M., KoÅŸar, A.","The effect of prostate weight on the radical prostatectomy outcomes","","3(1):56-58","8e1a8d15-482c-403e-acd8-5559f4f70d61","","Aim: The aim of study was to evaluate the impact of prostate weight on radical prostatectomy outcomes (cancer control, urinary continence, and erectile dysfunction) in prostate cancer patients. Material and Method: The files of 92 patients who underwent retropubic radical prostatectomy were retrospectively reviewed. Patients' data on demography, tumor characteristics, oncological, urinary and erectile function outcomes were estimated. Results were compared according to the prostate weights (Group 1: â‰¤ 60 g, Group 2: > 60 g). Result: Patients that have prostate weight of >60 g were %35,9. Preoperative Prostate Spesific Antigen (PSA) volumes (9.9 - 14.1 ng/ ml, p<0.05) and patient number that have a biopsy Gleason score smaller than 6 (%76.3 - %87.9, p<0.05) were greater in patients that have bigger prostate. The patient number that have a pathologic stage of T2a-b was also higher in Group 2 (%20.4 - %45.4, p<0.05). There were no statistically significant differences in the rate of surgical positive margin, biochemical recurrence, urinary incontinence and erectile function between groups. Discussion: Despite their higher preoperative PSA levels, radical prostatectomy in patients with large prostate has good and sufficient oncological results. Also, this group was comparable with patients with small prostate in terms of urinary continence and erectile function.","","","RefMan","","","","","","","","","","Unknown","Unknown","Unknown","Unknown","","","1998","Dutta, H. M., Roy, P. K., Singh, N. K., Adhikari, S., Munshi, J. D.","Effect of sublethal levels of malathion on the gills of Heteropneustes fossilis: scanning electron microscopic study","Journal of environmental pathology, toxicology and oncology : official organ of the International Society for Environmental Toxicology and Cancer","17(1):51-63","92c9b447-2925-40d5-ae01-19f782e909d1","","Scanning electron microscopic studies of the gills of catfish, Heteropneustes fossilis, exposed to sublethal malathion (4 mg/L and 6 mg/L) revealed that 24-hour exposure to 4 mg/L had a mild effect. However, severe damage was found after 48- and 72-hour exposures. After a 24-hour exposure to a 6 mg/L concentration, more severe damage ensued. The microridged epithelial cells of the gill arch became perforated and the central portion of the filament appeared elevated. Numerous mucous gland openings also became visible. After 48- and 72-hour exposures, the damage and structural changes were more pronounced when compared with the 4 mg/L exposure. Enlarged mucous gland openings were found on the gill arch. The lamellar surface had many crevices, elevations and depressions. Broken microridges in the gill arch surface were visible at a 72-hour exposure. At 96 hours of exposure, structural recovery occurred to some extent in both the 4- and 6-mg/L exposures. Corrugation and dissociated epithelium along with some interlamellar bridges were evident after 72 hours of exposure to both concentrations. Such deleterious effects cause reduction in available water supply as well as available respiratory area that may result in decreased oxygen uptake. Consequently, fish may fail to get sufficient oxygen and

asphyxiate.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2015","Omran, O. M., Omer, O. H.","The effects of alpha-lipoic acid on breast of female albino rats exposed to malathion: Histopathological and immunohistochemical study","","211(6):462-469","679fac48-468b-489e-8879-01f6f6dfa8b7","","Background: The wide use of the organophosphate insecticide malathion is accompanied by the risk of human exposure and may be involved in the etiology of breast cancers, especially in developing countries. Alpha (Î±)-lipoic acid, a natural molecule, present in our diet has antioxidant and protective effects in cases such as aging, diabetes mellitus, and vascular and neurodegenerative diseases all in which free radicals are involved. However, there is only scarce data regarding the efficacy and biological activity of Î±-lipoic acid on malathion-induced breast histopathological changes. Aims: To investigate whether malathion can induce mammary histopathological changes, to immunohistochemically analyze the modulations in proliferation-apoptosis balance associated with these changes, to assess the associated metabolic parameters, antioxidant stress and hormonal profile changes and to elucidate the possible protective effect of Î±-lipoic acid on malathion induced alterations in rats. Materials and methods: Forty Wistar female rats weighing 150-170. g were divided into four groups. Group 1: control group were injected intraperitoneally (ip) with saline solution. Group2: animals were injected (ip) with malathion twice a day for five days. Group 3: animals were orally given Î±-lipoic acid, after three hours of treatment with malathion at the same dose given to group 2. Group 4: animals were treated with Î±-lipoic acid at the same dose given to group 3. Rats were sacrificed on the 90th day, and breast tissues were analyzed for histopathological and immunohistochemical alterations. Blood samples were collected for biochemical tests. Results: Î±-Lipoic acid exhibited a striking reduction of malathion-induced mammary tumor incidence, and reversed intra-tumor histopathological alterations. Alpha lipoic acid suppressed proliferating cell nuclear antigen (PCNA) and p53 expression, induced apoptosis, upregulated proapoptotic protein Bax. Conclusions: Our results provide the experimental evidence that Î±-lipoic acid exerts chemopreventive effect in the breast hyperplastic and malignant changes by suppressing abnormal cell proliferation and inducing apoptosis with an oncostatic effects during an early-stage breast cancer.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2015","Ghisari, M., Long, M., Tabbo, A., Bonefeld-Jorgensen, E. C.","Effects of currently used pesticides and their mixtures on the function of thyroid hormone and aryl hydrocarbon receptor in cell culture","Toxicology and applied pharmacology","284(3):292-303","c9ca0003-dd67-4154-bb91-0b74f659a56d","","Evidence suggest that exposure to pesticides can interfere with the endocrine system by multiple mechanisms. The endocrine disrupting potential of currently used pesticides in Denmark was analyzed as single compounds and in an equimolar mixture of 5 selected pesticides. The pesticides were previously analyzed for effects on the function of estrogen and androgen receptors, the aromatase enzyme and steroidogenesis in vitro. In this study, the effect on thyroid hormone (TH) function and aryl hydrocarbon receptor (AhR) transactivity was assessed using GH3 cell proliferation assay (T-screen) and AhR responsive luciferase reporter gene bioassay, respectively. Thirteen pesticides were analyzed as follows: 2-methyl-4-chlorophenoxyacetic acid, terbuthylazine, iodosulfuron-methyl-sodium, mesosulfuron-methyl, metsulfuron-methyl, chlormequat chloride, bitertanol, propiconazole, prothioconazole, mancozeb and its metabolite ethylene thiourea, cypermethrin, tau-

fluvalinate, and malathion (currently banned in DK). In the T-screen, prothioconazole, malathion, tau-fluvalinate, cypermethrin, terbuthylazine and mancozeb significantly stimulated and bitertanol and propiconazole slightly reduced the GH3 cell proliferation. In the presence of triiodothyronine (T3), prothioconazole, tau-fluvalinate, propiconazole, cypermethrin and bitertanol significantly antagonized the T3-induced GH3 cell proliferation. Eleven of the tested pesticides agonized the AhR function, and bitertanol and prothioconazole inhibited the basal AhR activity. Bitertanol, propiconazole, prothioconazole and cypermethrin antagonized the TCDD-induced AhR transactivation at the highest tested concentration. The 5-component mixture had inducing effect but the combined effect could not be predicted due to the presence of bitertanol eliciting inhibitory effect. Upon removal of bitertanol from the mixture, the remaining four pesticides acted additively. In conclusion, our data suggest that pesticides currently used in Denmark can interfere with TH signaling and AhR function in vitro and might have the potential to cause endocrine disruption.","","","RefMan","","","","","","","","","",""
"Unknown","Unknown","Unknown","Unknown","","","2015","Liu, L., Ding, G.","Effects of different blood purification methods on serum cytokine levels and prognosis in patients with acute severe organophosphorus pesticide poisoning","","19(2):185-190","0bcce2da-5b43-431c-b46e-158cada37d98","","The aim of the present study was to investigate the impact of three different blood purification methods, hemoperfusion (HP), continuous blood purification (CBP), and on-line high-volume hemodiafiltration (OL-HDF), on the survival rate of patients with acute severe organophosphorus pesticide poisoning (ASOPP), as well as on major pro-inflammatory (interleukin [IL]-1, IL-6, tumor necrosis factor-Î± [TNF-Î±]) and anti-inflammatory (IL-10) cytokines in the serum. Eighty-one ASOPP patients were randomly divided into three groups: HP (N=23), HP+CBP (N=26), HP+OL-HD (N=32). Serum IL-1, IL-6, TNF-Î±, and IL-10 levels were assessed by ELISA before treatment and at 24 and 48h post-treatment and survival rates were determined. Patient survival rate was significantly higher in OL-HDF and CBP treated patients compared with HP group (P<0.05). A significantly greater clearance effect in serum IL-1, IL-6, and TNF-Î± levels at 24 and 48h post-treatment was observed in CBP and OL-HDF groups compared with the HP group (P<0.05). The levels of serum anti-inflammatory cytokine IL-10 increased significantly in CBP and OL-HDF groups compared with the HP group (P<0.05 at 48h post-treatment). In addition, OL-HDF treatment achieved similar changes in serum TNF-Î±, IL-1, IL-6 and IL-10 levels as CBP (P>0.05). Compared with the HP method, CBP or OL-HDF combined with HP can rapidly clear inflammatory cytokines, reduce systemic inflammatory response syndrome, and improve the survival of ASOPP patients. Compared with CBP, OL-HDF is an economical and effective method to treat ASOPP with less technical difficulty and more suitability for rural areas and primary hospitals.","","","RefMan","","","","","","","","","",""
"Unknown","Unknown","Unknown","Unknown","","","2012","Ã‡aÇ§layan, A., Akbulut, Z., Atmaca, A. F., Altinova, S., KiliÃ§, M., Balbay, M. D.","Effects of neoadjuvant chemotherapy on pathological parameters and survival in patients undergoing radical cystectomy for muscle-invasive bladder cancer","","42(4):623-629","37565266-ee56-46b6-9d2a-8d9f6512ba48","","Aim: To evaluate the effect of neoadjuvant chemotherapy on tumor pathology and patient survival in patients with muscle-invasive bladder cancer undergoing radical cystectomy. Neoadjuvant chemotherapy is believed to prevent micrometastasis and provide pathological downstaging. Materials and methods: Between June 2004 and March 2009, 74 patients with muscle-invasive bladder cancer were treated

with radical cystectomy. Patients fit to receive chemotherapy were administered systemic chemotherapy of methotrexate, vinblastine, Adriamycin, and cisplatin (MVAC); gemcitabine and cisplatin (GC); or carboplatin and gemcitabine (CG). Patients in Group 1 (n = 36) did not receive any chemotherapy, while the remaining 38 patients in Group 2 did so, before radical cystectomy. Patient characteristics, pathological staging, and survival analysis were compared statistically between groups. Results: The mean follow-up time was 16.12 Â± 12.13 months. There was no significant difference between the groups regarding patient age, sex, preoperative clinical staging, lymph node invasion, comorbidity, type of urinary diversions done, postoperative early complications, progression-free survival (21.96 Â± 3.5 and 23.44 Â± 2.5 months; P = 0.275), and overall survival rates (25.76 Â± 3.5 and 23.57 Â± 2.4 months; P = 0.646). However, differences in pathological downstaging (pT3-pT4, 21.58% and 16.42% for groups 1 and 2, respectively; P < 0.001) and perioperative mortality (6 vs. 0 deaths in groups 1 and 2; respectively) were significant between groups. Conclusion: Neoadjuvant chemotherapy may result in pathological downstaging while having no effects on progression-free or overall survival rates. Â© TÃœBÄ°TAK.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","1997","Rodgers, K. E.","Effects of oral administration of malathion on the course of disease in MRL-lpr mice","Journal of autoimmunity","10(4):367-73","cc95aa2e-31a8-4447-ae22-5bf8b6426330","","Malathion administration at non-cholinergical doses was shown to elevate macrophage, proliferative and humoral immune responses. This study examined the effects of malathion on autoimmunity, autoantibody formation, macrophage function and mitogenic responses in MRL-lpr mice (genetically predisposed to autoimmune disease) and MRL-+/+ mice. Malathion, 33-300mg/kg, was administered by gavage once per week, beginning at 6 weeks of age. At 300mg/kg in MRL-lpr mice, malathion administration accelerated the appearance of significant (>100mg/l) levels of urinary protein by approximately 3 weeks and increased the maximum level of protein detected. Increased urinary protein was delayed at lower doses of malathion, but was elevated compared to vehicle control. This increase in urinary protein was not observed in the group of MRL-+/+ mice. The popliteal and axillary lymph nodes (LN) were larger in malathion-treated (>33mg/kg) than in control mice at 19 weeks of age. Within the same time-frame in MRL-+/+ mice, malathion did not affect and increased the size of the axillary and popliteal LN, respectively. Rheumatoid factor (RF) and anti-DNA (dsDNA) antibodies in the serum were not elevated in any group of MRL-+/+ mice by 19 weeks of age. However, in the MRL-lpr mice, weekly malathion treatment (>33mg/kg) elevated the level of serum RF at 12 and 19 weeks of age. Malathion treatment (>100mg/kg) also increased the level of anti-dsDNA antibodies in the serum of MRL-lpr mice at 19 weeks of age. Malathion treatment increased the number of inflamed glomeruli. Histopathological analysis of various organs showed no effect on vasculitis after malathion treatment. Acute administration of 300mg/kg malathion to 6-week-old mice elevated the secretion of nitric oxide by peritoneal macrophages, but did not affect the secretion of tumor necrosis factor. In addition, the basal and mitogen-induced proliferation of splenocytes of malathion-treated MRL-lpr mice were elevated, but the stimulation index was unchanged.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2008","Corsini, E., Liesivuori, J., Vergieva, T., Van Loveren, H., Colosio, C.","Effects of pesticide exposure on the human immune system","","27(9):671-680","6029a497-9c0c-4a29-a276-67d463a0814b","","Epidemiological evidence from Western countries indicates that the

prevalence of diseases associated with alterations in the immune response, such as asthma, certain autoimmune diseases and cancer, are increasing to such an extent that it cannot be attributed to improved diagnostics alone. There is some concern that this trend could be, at least, partially attributable to new or modified patterns of exposures to chemicals, including pesticides. The purpose of this article is to review the evidence on pesticide immunotoxicity in humans. Overall, the available data are inadequate to draw firm conclusions on the immunotoxic risk associated with pesticide exposure. The available studies on the effects of pesticides on the human immune system have several limitations, including limited data on exposure levels, heterogeneity of the applied methods, and difficulties in assessing the prognostic significance of observed slight changes and in the interpretation of the reported findings. Further studies are needed and preferably as prospective studies, comparing pre- and post-exposure data in the same group of subjects and including an appropriate non-exposed control group. More knowledge is required regarding the prognostic significance of the small changes observed. Â© 2008 SAGE Publications.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2002","Galindo Reyes, J. G., Leyva, N. R., Millan, O. A., Lazcano, G. A.","Effects of pesticides on DNA and protein of shrimp larvae Litopenaeus stylirostris of the California Gulf","Ecotoxicology and environmental safety","53(2):191-5","e2720475-e086-4f01-bdde-982097289ba1","","Recently, diverse pathologies and massive mortalities have been presented in shrimp hatcheries located along the California Gulf; therefore, toxic responses of shrimp larvae were used as biomarkers of pesticide pollution, because in this region intensive agriculture is practiced. Shrimp larvae were exposed to DDT, azinphosmethyl, permethrine, parathion, chlorpyrifos, malathion, endosulfan, and carbaryl, in order to determine LC50, DNA adducts and/or breaks, and total protein in larvae. The results indicate reductions in protein and DNA in larvae exposed to these pesticides, and in those exposed to DDT, breaks and/or adducts were registered. It is possible that pesticide pollution is a cause of these problems, because reduction in protein indicates a decrease in larvae growth rate and DNA breaks or adducts have been related to pathologies and carcinogenesis in many aquatic organisms.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2008","Ohnishi, T., Yoshida, T., Igarashi, A., Muroi, M., Tanamoto, K.","Effects of possible endocrine disruptors on MyD88-independent TLR4 signaling","FEMS immunology and medical microbiology","52(2):293-5","a10ffed0-9ec6-4c71-a0c8-6e0d8b2365e1","","Endocrine disrupting chemicals (EDCs) may potentially worsen infectious diseases because EDCs disturb human immune function by interfering with endocrine balance. To evaluate the influence of EDCs on the innate immune function of macrophages, we investigated the effects of 37 possible EDCs on lipopolysaccharide-induced activation of the IFN-beta promoter. Alachlor, atrazine, benomyl, bisphenol A, carbaryl, diethyl phthalate, dipropyl phthalate, kelthane, kepone, malathion, methoxychlor, octachlorostyrene, pentachlorophenol, nonyl phenol, p-octylphenol, simazine and ziram all inhibited the activation. Kepone and ziram showed strong inhibitory effects. Aldicarb, amitrole, benzophenone, butyl benzyl phthalate, 2,4-dichlorophenoxy acetic acid, dibutyl phthalate, 2,4-dichlorophenol, dicyclohexyl phthalate, diethylhexyl adipate, diethylhexyl phthalate, dihexyl phthalate, di-n-pentyl phthalate, methomyl, metribuzin, nitrofen, 4-nitrotoluene, permethrin, trifluralin, 2,4,5-trichlorophenoxyacetic acid

and vinclozolin had no significant effects at 100 muM. These results indicate that some agrochemicals and resin-related chemicals may potentially inhibit macrophage function, which suggests that endocrine disruptors may influence the development of infectious diseases.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2012","Alp, H., Aytekin, I., Hatipoglu, N. K., Alp, A., Ogun, M.","Effects of sulforophane and curcumin on oxidative stress created by acute malathion toxicity in rats","European review for medical and pharmacological sciences","16 Suppl 3:144-8","8fea65f4-5bbb-4c05-b9d5-318c5a2957a8","","BACKGROUND AND OBJECTIVES: Organophosphate insecticides (OPIs) are widely used in agriculture and horticulture for controlling insects in crops, ornamentals, lawns, fruits, and vegetables. But, there have not yet any study about effects of sulforophane (SFN) and curcumin (CUR) on the oxidative stress created by acute toxic effects of malathion (MAL) as an OPI often causing human and animal poisoning. AIM: The aim of this study was to investigate the effects of SFN and CUR on the oxidative stress created in the lung, liver, and kidney tissues of rats by acute MAL toxicity. MATERIALS AND METHODS: Thirty-six mature Sprague Dawley rats weighing 200-250 g were used. The rats were randomly divided into six groups: unmedicated control, SFN, CUR, MAL control, MAL + SFN, and MAL + CUR. Tissue samples were analyzed for glutathione (GSH), malondialdehyde (MDA), and nitric oxide (NO) levels in the lung, liver, and kidney tissues. Biochemical parameters were measured colorimetrically by using a spectrophotometer. RESULTS: No statistically significantly difference was found when comparing the unmedicated control, SFN, and CUR groups. MAL significantly increased MDA levels in the liver and kidney tissues, but SFN and CUR these levels. MAL did significantly reduce the GSH levels, but SFN and CUR increased these levels by blocking the MAL effect in the liver tissues. Also, MAL significantly increased the NO levels, depending on the severity of the tissue damage, and SFN and CUR attenuated to NO levels and remained under the effect of MAL. CONCLUSIONS: SFN and CUR, which showed similar effects, could be used to protect against the oxidative stress caused by acute malathion intoxication.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2015","Barash, C. I.","Emerging Translational Research Methods: A Sampling","","7:1","e1cf98ad-2376-49ab-b991-988f67c50bbd","","","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2010","Liu, H., Liu, J., Xu, L., Zhou, S., Li, L., Liu, W.","Enantioselective cytotoxicity of isocarbophos is mediated by oxidative stress-induced JNK activation in human hepatocytes","Toxicology","276(2):115-21","e1e5b9ea-74a9-45d7-ba9a-9e37626eb9ab","","Recent studies have shown the enantioselectivity of chiral pesticides in environmental fate, aquatic toxicity, endocrine disruption and cytotoxicity. Thus it is of significance to investigate the molecular mechanisms of chiral pesticides enantioselectivity in cytotoxicity. In the present study, we used Hep G2 cells as in vitro model to assay cytotoxicity of enantiomers of isocarbophos (ICP), a widely used chiral organophosphorus pesticide. The results of cell viability assay and cytoflow assay indicated an obvious enantioselective hepatocyte toxicity of ICP: (-)-ICP was about two times more toxic than (+)-ICP in Hep G2 cells. We found that (-)-ICP, but not (+)-ICP, up-regulated Bax protein expression and down-regulated Bcl-2 expression levels, which resulted in an increase in Bax/Bcl-2 ratio with the apoptosis co-ordination. Although (-)-ICP enantioselectively activated both ERK and JNK, only the specific inhibitor for JNK could completely reverse (-)-ICP-induced apoptosis of Hep G2 cells. It suggests that (-

)-ICP-induced hepatocyte toxicity was more dominantly through the sustained activation of JNK pathway, but only partially via ERK cascade. Furthermore, (-)-ICP induced ROS production, while (+)-ICP had no effect on ROS generation. The antioxidant MnTBAP attenuated (-)-ICP-induced activation of JNK and ERK, indicating that the outcome from challenge with (-)-ICP enantiomer depends on the oxidative stress-induced activation of a series of signaling cascades that promote hepatocyte apoptosis. In conclusion, (-)-ICP enantioselectively causes the change of Bax/Bcl-2 ratio, triggers the generation of intracellular ROS and sequentially induces sustainable activation of JNK, which in turn, results in a decrease in cell viability and an increase in cell apoptosis. Our observations provide further insight into enantiomers toxicity pathway which is able to differentiate between enantiomer activities at molecular level.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2014","Kappil, M., Chen, J.","Environmental exposures in utero and microRNA","","26(2):243-251","8c293763-2da4-4f31-8b20-dbd944bbe698","","PURPOSE OF REVIEW: Understanding the effects of in-utero exposures to environmental agents is of great importance as the resulting deregulation of biological processes can affect both fetal development and health outcomes that manifest later in life. Due to their established role in developmental processes and inherent stability ex vivo, microRNAs (miRNAs) have emerged as attractive candidates to explore the impact of such exposures during this critical window of susceptibility. In this review, we summarize the findings of studies assessing miRNAs as markers of in-utero environmental exposures and as candidates for the molecular basis through which these exposures exert their influence on children's health. RECENT FINDINGS: To date, miRNA expression profiles due to various in-utero environmental exposures, including xenochemicals, endogenous factors, and nutritional status, have been reported. SUMMARY: While the validity of the identified exposure-specific miRNA profiles remains to be established, the findings thus far do raise interesting questions worth addressing in future studies. Gaps that remain to be addressed include linking specific in-utero exposures to subsequent health outcomes based on established miRNA expression profiles and experimentally validating putative downstream targets of the deregulated miRNAs. Â© 2014 Wolters Kluwer Health Lippincott Williams & Wilkins.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2014","Sengupta, P., Banerjee, R.","Environmental toxins: Alarming impacts of pesticides on male fertility","","33(10):1017-1039","6387cc3b-d28c-4bd8-9586-487e8d17d6cc","","This review comprehensively summarizes the effects of more than 15 mostly used pesticides on male reproductive physiology, as recent experimental and epidemiological research have indicated their alarming impact on overall human health. Mechanisms have described that pesticide exposure damages spermatozoa, alter Sertoli or Leydig cell function, both in vitro and in vivo and thus affects semen quality. But, the literature suggests a need for more intricate research in those pesticides that are defined as mutagens or carcinogens and directly affect the hypothalamic-pituitary-gonadal axis. This literature review also proposes specific solutions to overcome these health effects.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2009","Inomata, H., Takei, M., Nakamura, H., Fujiwara, S., Shiraiwa, H., Kitamura, N., Hirohata, S., Masuda, H., Takeuchi, J., Sawada, S.","Epstein-Barr-virus-infected CD15 (Lewis X)-positive Hodgkin-lymphoma-like B cells in patients with rheumatoid arthritis","","3:41-47","3bd9c758-8b6a-4de6-8248-

783b5bbff1c7","","Patients with rheumatoid arthritis (RA), especially those who are treated with methotrexate (MTX), might have an increased risk of Hodgkin lymphoma (HL), a malignancy that is associated with Epstein-Barr virus (EBV). Here we describe a monoclonal EBV-infected B-lymphoblastoid cell line (LCL) called TKS-1 that was established from cells that spontaneously converted from an MTX-treated RA patient. TKS-1 has properties similar to HL cells and it is distinctly different from control LCLs established from normal individuals. TKS-1 cells express the HL -associated surface markers CD15 and CD30 (Takei et al. 1989). Like Hodgkin Reed-Sternberg (H-RS) cells of EBV-positive HL, TKS-1 cells express EBNA1 mRNA transcribed from the Qp promoter of the virus, whereas control LCLs use the Cp or Wp promoter to transcribe mRNA. TKS-1 cells can proliferate in an anchorage-independent manner and possess a cloning efficiency comparable to that of the Burkitt lymphoma (BL) line Raji. In addition, two EBV-positive LCLs established by cocultivated CD34+ cells isolated from the bone marrow of patients with RA and peripheral blood B lymphocytes from a healthy EBV-seronegative individual also expressed CD15. These results indicate that EBV-infected B-lymphoblastoid cells from patients with RA tend to acquire properties similar to HL cells. Â© Inomata et al.; Licensee Bentham Open.","","","RefMan","","","","","","","","","",""

"Unknown","Unknown","Unknown","Unknown","","","2015","Akoto, O., Gavor, S., Appah, M. K., Apau, J.","Estimation of human health risk associated with the consumption of pesticide-contaminated vegetables from Kumasi, Ghana","","187(5)","bec9dbec-ce1c-445b-bf95-fc173f78b906","","Analysis of pesticides consisting of 12 organophosphates (OPs), 10 organochlorines (OCs), and 6 pyrethroids in vegetables from Kumasi was conducted. Vegetable samples comprising 20 each of eggplants, okra, and tomatoes were analyzed. The method involves solvent extraction of pesticide residues followed by cleanup using silica gel. Residue analysis was carried out using a GC equipped with pulsed flame photometric detector for OP residues and electron capture detector for OC and pyrethroid residues. The results revealed that methamidophos exceeded the maximum residue limits (MRLs) in all vegetable commodities. Levels of malathion and dimethoate also exceeded the MRLs in eggplant and tomato samples. Endrin, Î±-endosulfan, Î³-hexachlorocyclohexane (HCH), Î³-chlordane, and heptachlor exceeded their MRLs in okra samples whereas methoxychlor, allethrin, and deltamethrin exceeded in eggplant samples. Health risk estimation revealed that dimethoate in tomato and endrin, heptachlor, Î³-HCH, and Î³-chlordane in okra could not pose potential toxicity to the consumer. The combined risk index showed no health risk to consumers due to intake of pyrethroid OC and OP residue on these vegetables. The overall risk index for combined pesticides due to consumption of all the vegetables was higher than 1, which signifies potential health risk to consumers. OPs were the major risk contributor for both eggplant and tomatoes which accounted for 87.78 and 95.84Â %, respectively, of the combined risk of pesticides in the vegetables. However, OC with 97.94Â % of the combined risk index was the major risk contributor for the okra. The carcinogenic risk of the OCs in okra was of no concern since their carcinogenic rates were below the acceptable risk level.","","","RefMan","","","","","","","","","",""

"Unknown","Unknown","Unknown","Unknown","","","2002","Chen, H., Xiao, J., Hu, G., Zhou, J., Xiao, H., Wang, X.","Estrogenicity of organophosphorus and pyrethroid pesticides","Journal of toxicology and environmental health. Part A","65(19):1419-35","7d06ce14-b8bc-4184-9303-204101843384","","Although organophosphorus and pyrethroid pesticides are considered environmental contaminants, their estrogenic potentials are

still ubiquitous and unclear. The present study was undertaken to evaluate the estrogenic activities of nine pesticides (phoxim, malathion, monocrotophos, dimethoate, opunal, fenvalerate, cypermethrin, permethrin, and deltamethrin) using three in vitro methods [E-Screen assay, estrogen receptor (ER) competitive binding assay, and pS2 expression assay]. All the pyrethroid pesticides tested induced MCF-7 cell proliferation significantly, while organophosphorus pesticides did not. The estrogenic potency were ranked as permethrin > fenvalerate > cypermethrin > deltamethrin. The proliferation induced by cypermethrin, permethrin, and deltamethrin was blocked by ICI 182.780, while fenvalerate only partly inhibited it. In addition, pyrethroid pesticides inhibited the binding of [3H]estradiol to ER, while the organophosphorus failed to do so. Fenvalerate, permethrin, and cypermethrin induced pS2 mRNA expression with varying potency, while there were no significant effects in deltamethrin-treated groups. Our findings provide evidence to support the idea that pyrethroid pesticides tested produce an ER-specific, agonist response. Fenvalerate induced MCF-7 cell proliferation by a mechanism not involving ER-mediated pathway. Organophosphorus pesticides tested showed no estrogenic potential. Compared with the pS2 expression assay, E-Screen was a more sensitive and useful assay for screening of the xenoestrogenic chemicals.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2013","Sanabrais, M. A., Navarrete-Meneses, M. P., Betancourt, M., Salas-LabadÃ-a, C.","ETV6 and RUNX1 aberrations produced by exposure to permethrin and malathion on human lymphocytes in vitro. pÃ©rez-vera p1","","54:S44","6020c6fe-e589-40a8-83f3-a7b3dc0c9a7a","","Introduction: Acute Lymphoblastic Leukemia (ALL) is the most frequent cancer in childhood with multifactorial etiology, including exposure to pesticides. Although numerous epidemiological studies associate ALL with the use of insecticides, there is limited biological evidence to support it. ALL blasts frequently present acquired abnormalities in ETV6 and RUNX1 genes, associated to the origin and evolution of the disease. The aim of this study was to detect alterations in ETV6 and RUNX1 induced by permethrin and malathion on human lymphocytes in vitro. Methods: Lymphocytes from two male healthy volunteers were cultured for 72h and exposed to 200mM of permethrin or malathion for the last 24h. Solvents were used as negative controls. ETV6 and RUNX1 genes were analyzed in 1000 nuclei by fluorescence in situ hybridization (FISH). Results: For both insecticides, cells with copy number deviations were observed more frequently (94%: -/+ETV6, - RUNX1) than structural aberrations (6%: ETV6-RUNX1 fusion; amplification). With both agents, the number of cells with numerical aberrations was increased, but only the treatment with permethrin showed statistical difference ($p<0.01$). Discussion: Numerical deviations of ETV6 and RUNX1 were observed by malathion and permethrin exposure. Permethrin caused the major difference; the numerical abnormalities observed could be originated by an aneuploidogenic effect, although the origin of these abnormalities must be explored. These insecticides induced numerical and structural abnormalities which are commonly detected in lymphoblast of ALL-patients with active disease, suggesting a possible contribution to the development of this leukemia.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2015","Ojha, A., Gupta, Y. K.","Evaluation of genotoxic potential of commonly used organophosphate pesticides in peripheral blood lymphocytes of rats","","34(4):390-400","cf2a5d05-7683-4106-a404-d4349090075b","","Chlorpyrifos (CPF), methyl parathion (MPT), and malathion (MLT) are among the most extensively used organophosphate (OP) pesticides in India. DNA protein

cross-links (DPC) and DNA strand breaks are toxic lesions associated with the mechanism(s) of toxicity of carcinogenic compounds. In the present study, we examined the hypothesis that individual and interactive genotoxic effects of CPF, MPT, and MLT are involved in the formation of DPC and DNA strand break. The DNA strand break was measured by comet assay and expressed as DNA damage index, while DPC estimation was carried out by fluorescence emission assay. The results showed that exposure of rat lymphocytes with CPF, MPT, and MLT caused significantly marked increase in DNA damage and DPC formation in time-dependent manner. MPT caused the highest damage, and these pesticides do not potentiate the toxicity of each other.","","","RefMan","","","","","","","","","","Unknown","Unknown","Unknown","Unknown","","","2007","JÃ¸nler, M., Johansen, J. K., Lund, L., Pedersen, K. V., Graversen, P. H.","Evaluation of radical prostatectomies for localized prostate cancer performed in center satellite collaboration - Is it possible?","","169(20):1917-1921","5d3fead7-753a-4bc5-abd9-395d70e241bc","","Introduction: In an effort to comply with the increasing demand for surgery for localized prostate cancer a center satellite collaboration was established between a university department and two local urological departments. The purpose of the present study was to evaluate open radical prostatectomies performed by this collaboration. Materials and methods: The centre satellite collaboration included preoperative evaluation and treatment at local hospitals and evaluation of operative results by audit every 6 months. Results: 104 patients were operated during the study period. 4 patients were excluded due to findings of carcinoma in lymph nodes examined by frozen section. This study describes the first 100 radical prostatectomies. Median operating time was 85 minutes (60-175) and median hospitalization was 6 days (5-23). 18 patients received blood transfusions in relation to surgery. Perioperative mortality was 0. Histological examination of prostatectomy specimens revealed that 70 patients had a localised prostate cancer (organ confined tumour) and were considered cured for their cancer. Few patients had full urinary control (no pads) at 6 weeks control, and at 12 months control 49 of 50 controlled patients were considered continent. Potency was a major problem. 22% of the 50 patients evaluated after 12 months had PSA recurrence and almost all were given adjuvant hormonal treatment. Conclusions: Radical prostatectomy performed in collaboration between a university department and local urological departments as described is beneficial to both patients and the departments involved. Postoperative results matching larger departments can be achieved.","","","RefMan","","","","","","","","","","Unknown","Unknown","Unknown","Unknown","","","2011","Hohenadel, K., Harris, S. A., McLaughlin, J. R., Spinelli, J. J., Pahwa, P., Dosman, J. A., Demers, P. A., Blair, A.","Exposure to multiple pesticides and risk of non-Hodgkin lymphoma in men from six Canadian provinces","","8(6):2320-2330","f8eb6321-d2c6-4331-826c-3607fe428e0b","","Non-Hodgkin lymphoma (NHL) has been linked to several agricultural exposures, including some commonly used pesticides. Although there is a significant body of literature examining the effects of exposure to individual pesticides on NHL, the impact of exposure to multiple pesticides or specific pesticide combinations has not been explored in depth. Data from a six-province Canadian case-control study conducted between 1991 and 1994 were analyzed to investigate the relationship between NHL, the total number of pesticides used and some common pesticide combinations. Cases (n = 513) were identified through hospital records and provincial cancer registries and controls (n = 1,506), frequency matched to cases by age and province of residence, were obtained

through provincial health records, telephone listings, or voter lists. In multiple logistic regression analyses, risk of NHL increased with the number of pesticides used. Similar results were obtained in analyses restricted to herbicides, insecticides and several pesticide classes. Odds ratios increased further when only potentially carcinogenic pesticides were considered (OR[one pesticide] = 1.30, 95% CI = 0.90-1.88; OR[two to four] = 1.54, CI = 1.11-2.12; OR[five or more] = 1.94, CI = 1.17-3.23). Elevated risks were also found among those reporting use of malathion in combination with several other pesticides. These analyses support and extend previous findings that the risk of NHL increases with the number of pesticides used and some pesticide combinations. Â© 2011 by the authors; licensee MDPI, Basel, Switzerland.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2010","Kreis, M. E.","Extent of surgical therapy for rectal cancer: Standards and perspectives","","16(8):757-763","d4812c42-363e-4dc5-862f-a32ef5ff105f","","The spectrum of modern surgery for rectal cancer covers a range of different operations which should be differentially used following careful patient selection. Optimal surgery implies that a maximum level of oncological therapy is achieved without unnecessary morbidity, functional impairment or loss of quality of life. As a consequence ""low risk"" cancers should be treated by local excision to avoid undue morbidity even if a minimal risk of local recurrence must be accepted. Furthermore, sphincter preservation is possible if cancers are situated more than 1-2 cm above the dentate line in patients with normal continence so that an abdomino-perineal excision is only mandatory for tumors below this level. Most patients are operated on by anterior rectal resection and total mesorectal excision. It is currently under investigation whether partial mesorectal excision is sufficient for tumors in the upper third of the rectum. Optimal radical surgery for rectal cancer may also mean that multivisceral excision is necessary to achieve the R0 situation which represents a prerequisite for a possible long-term disease-free survival. Â© 2010 Springer-Verlag.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2008","Saika, S., Yamanaka, O., Sumioka, T., Miyamoto, T., Miyazaki, K. I., Okada, Y., Kitano, A., Shirai, K., Tanaka, S. I., Ikeda, K.","Fibrotic disorders in the eye: Targets of gene therapy","","27(2):177-196","914667af-9bc7-4ed8-a48e-6f8603b356ae","","Fibrotic diseases, e.g., cutaneous and corneal scarring, keloids, and liver and lung fibrosis, etc., are characterized by appearance of myofibroblasts, the key player of the fibrogenic reaction, and excess accumulation of extracellular matrix with resultant tissue contraction and impaired functions. Inflammatory/fibrogenic growth factors/cytokines produced by injured tissues play a pivotal role in fibrotic tissue formation. Ocular tissues are also susceptible to fibrotic diseases. In this article, the pathogenesis of such fibrotic disorders in the eye, i.e., scarring in the cornea and conjunctiva, post-cataract surgery fibrosis of the lens capsule and proliferative vitreoretinopathy are reviewed. Focus is put on the roles of myofibroblast and signals activated by the fibrogenic cytokine, transforming growth factor Î². Modulation of signal transduction molecules, e.g., Smad and mitogen-activated protein kinases, by gene transfer and other technology is beneficial and can be an important treatment regiment to overcome (prevent or treat) these diseases. Â© 2007 Elsevier Ltd. All rights reserved.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2004","Tuschl, H., Schwab, C. E.","Flow cytometric methods used as screening tests for basal toxicity of chemicals","Toxicology

in vitro : an international journal published in association with BIBRA","18(4):483-91","19ffecde-36f2-48b9-a330-99d9aea6e430","","Aim of the present study was to evaluate the suitability of flow cytometry to test in vitro effects of toxicants. Flow cytometry offers the possibility to study several parameters simultaneously, e.g. cell cycle modulation, apoptosis and necrosis within the same cell culture. The effects of six compounds (acetaminophen=AAP, isoniazid=INH, digoxin, malathion, paraquat and 2,4-dichlorophenoxy acetic acid=2,4-D) on cell cycle were investigated in HepG2 cells and the induction of apoptosis/necrosis was analyzed by a spectrum of flow cytometric assays in HepG2, AAH-1 and YAC-1 cells. Early indicators of apoptosis--loss of mitochondrial membrane polarization--as well as later events of the apoptotic process--annexin V binding and DNA fragmentation--were studied. The phases of the cell cycle and the occurrence of a sub-G(0) peak of apoptotic cells were determined with propidium iodide staining. The present investigation demonstrated good correlations between results obtained by flow cytometric analyses and the IC50 data of the MEIC (=Multicenter Evaluation of In Vitro Cytotoxicity) study. Regarding the short time required for the tests, the possibility of investigating several parameters of cytotoxicity simultaneously and the ease of performance, flow cytometric analyses are well suited for the pre-screening for toxic effects of chemicals.","","","RefMan","","","","","","","","","","Unknown","Unknown","Unknown","Unknown","","","2016","","From the editor's desk: Editor's highlights","","149(1):1","9ea5eb0f-dac7-474c-b6de-31356efab340","","","","","RefMan","","","","","","","","","","Unknown","Unknown","Unknown","Unknown","","","2013","Koutros, S., Berndt, S. I., Hughes Barry, K., Andreotti, G., Hoppin, J. A., Sandler, D. P., Yeager, M., Burdett, L. A., Yuenger, J., Alavanja, M. C., Beane Freeman, L. E.","Genetic susceptibility loci, pesticide exposure and prostate cancer risk","PloS one","8(4):e58195","361fdb43-3066-4195-bac8-54c7a70c380a","","Uncovering SNP (single nucleotide polymorphisms)-environment interactions can generate new hypotheses about the function of poorly characterized genetic variants and environmental factors, like pesticides. We evaluated SNP-environment interactions between 30 confirmed prostate cancer susceptibility loci and 45 pesticides and prostate cancer risk in 776 cases and 1,444 controls in the Agricultural Health Study. We used unconditional logistic regression to estimate odds ratios (ORs) and 95% confidence intervals (CIs). Multiplicative SNP-pesticide interactions were calculated using a likelihood ratio test. After correction for multiple tests using the False Discovery Rate method, two interactions remained noteworthy. Among men carrying two T alleles at rs2710647 in EH domain binding protein 1 (EHBP1) SNP, the risk of prostate cancer in those with high malathion use was 3.43 times those with no use (95% CI: 1.44-8.15) (P-interaction= 0.003). Among men carrying two A alleles at rs7679673 in TET2, the risk of prostate cancer associated with high aldrin use was 3.67 times those with no use (95% CI: 1.43, 9.41) (P-interaction= 0.006). In contrast, associations were null for other genotypes. Although additional studies are needed and the exact mechanisms are unknown, this study suggests known genetic susceptibility loci may modify the risk between pesticide use and prostate cancer.","","","RefMan","","","","","","","","","","Unknown","Unknown","Unknown","Unknown","","","2011","Barry, K. H., Koutros, S., Berndt, S. I., Andreotti, G., Hoppin, J. A., Sandler, D. P., Burdette, L. A., Yeager, M., Freeman, L. E. B., Lubin, J. H., Ma, X., Zheng, T., Alavanja, M. C. R.","Genetic variation in base excision repair pathway genes, pesticide exposure, and prostate

cancer risk","","119(12):1726-1732","3ff041d3-9a1c-4c29-9efc-9c3f53128e2b","","Background: Previous research indicates increased prostate cancer risk for pesticide applicators and pesticide manufacturing workers. Although underlying mechanisms are unknown, evidence suggests a role of oxidative DNA damage. Objectives: Because base excision repair (BER) is the predominant pathway involved in repairing oxidative damage, we evaluated interactions between 39 pesticides and 394 tag single-nucleotide polymorphisms (SNPs) for 31 BER genes among 776 prostate cancer cases and 1,444 male controls in a nested case-control study of white Agricultural Health Study (AHS) pesticide applicators. Methods: We used likelihood ratio tests from logistic regression models to determine p-values for interactions between three-level pesticide exposure variables (none/low/high) and SNPs (assuming a dominant model), and the false discovery rate (FDR) multiple comparison adjustment approach. Results: The interaction between fonofos and rs1983132 in NEIL3 [nei endonuclease VIII-like 3 (Escherichia coli)], which encodes a glycosylase that can initiate BER, was the most significant over-all [interaction p-value (pinteract) = 9.3 Ã- 10-6; FDR-adjusted p-value = 0.01]. Fonofos exposure was associated with a monotonic increase in prostate cancer risk among men with CT/TT genot{stroke}types for rs1983132 [odds ratios (95% confidence intervals) for low and high use compared with no use were 1.65 (0.91, 3.01) and 3.25 (1.78, 5.92), respectively], whereas fonofos was not associated with prostate cancer risk among men with the CC genot{stroke}type. Carbofuran and S-ethyl dipropylt{stroke}hiocarbamate (EPTC) interacted similarly with rs1983132; however, these interactions did not meet an FDR < 0.2. Conclusions: Our significant finding regarding fonofos is consistent with previous AHS findings of increased prostate cancer risk with fonofos exposure among those with a family history of prostate cancer. Although requiring replication, our findings suggest a role of BER genetic variation in pesticide-associated prostate cancer risk.","","","RefMan","","","","","","","","","","Unknown","Unknown","Unknown","Unknown","","","2011","Zhang, X., Wallace, A., Du, P., Baccarelli, A., Jafari, N., Lin, S., Hou, L.","Genome-wide study of DNA methylation alterations in response to pesticide exposure in in vitro","","71(8)","a8ef6195-4872-4053-89e8-d1f59318de1c","","Pesticides are widely used in the US and worldwide, and are pervasive in our environment. All pesticides sold in the US have passed the Environmental Protection Agency (EPA) screening procedures for carcinogenicity based on their genotoxicity and mutagenicity. However exposure to pesticides among pesticide applicators and manufacturing workers has repeatedly been shown to increase cancer risk, suggesting that pesticides may cause cancer via alternative mechanisms, such as epigenetic changes. The purpose of the present study is to examine whether exposure to organophosphate pesticides (OPs), a group of the most commonly used pesticides in the US, induces DNA methylation alterations in in-vitro. The K562 progenitor blood cell line was exposed to several OPs (i.e., chlorpyrifos, diazinon, fonofos, malathion, parathion, phorate, and terbufos) at different dosages and time periods. DNA was prepared from samples exposed to ethanol (control) and a range of pesticide concentrations similar to exposure levels experienced by the US licensed pesticide applicators. We conducted genomewide DNA methylation analysis using the Illumina Infinium HumanMethylation27 BeadChip that covers 27,578 individual promoter CpG sites in the entire genome. The relative level of methylation was calculated as the ratio of signal from a methylated probe relative to an unmethylated probe. Bayesian-adjusted t-tests were used to identify differentially methylated sites. A cut-off of False Discovery Rate (FDR)-adjusted p-value (q-value) < 0.05 and fold change > 2 was used to

identify candidate CpG sites. We observed significant differences in genomewide DNA methylation patterns in relation to exposure to three pesticides (i.e., fonofos, parathion, and terbufos) that have been associated with cancers in human studies. Out of all genes with differentially methylated CpG site(s) for each of the three pesticides, we identified 712 genes (625 were hypermethylated and 87 were hypomethylated) overlapped for these three pesticides. Gene ontology analysis showed that these hyper- or hypo-methylated genes are implicated in carcinogenesis and related biological process, such as tumor protein p53 inducible protein 11 (TP53I11) (4.0-fold for fonofos, 4.7-fold for parathion, 3.1-fold for terbufos, respectively), growth arrest and DNA-damage-inducible gamma (GADD45G) (25.2-fold for fonofos, 23.1-fold for parathion, 31.2-fold for terbufos, respectively), and interleukin-1 receptor (IL1R1) (-2.2-fold for fonofos, -2.1-fold for parathion, -2.2 fold for terbufos, respectively). Our results provided direct experimental evidence that pesticides can modify DNA methylation in gene promoter CpG sites, which may play pathological role in cancer development. Further studies in other cell types and human samples are required before any firm conclusion could be reached on the significance of pesticide-induced methylation.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","1999","Osaba, L., Aguirre, A., Alonso, A., Graf, U.","Genotoxicity testing of six insecticides in two crosses of the Drosophila wing spot test","Mutation research","439(1):49-61","2cd5542c-4d98-4c34-9c7c-30f6131edca8","","Among the great variety of genotoxicity assays available, the wing spot test in Drosophila melanogaster has some characteristics that make it very suited for the screening of genotoxic activity, i.e., it is an easy and inexpensive assay using a eukaryotic organism in vivo. One of the most interesting characteristics of the assay is its capacity to detect genotoxic activity of promutagens without the necessity of an exogenous metabolic activation system. In this paper we present results obtained with a recently developed high bioactivation cross of the wing spot test (NORR cross). The positive results obtained with the five well-known procarcinogens 7, 12-dimethylbenz[a]anthracene, N-nitrosopyrrolidine, p-dimethylaminoazobenzene, diethylnitrosamine and urethane clearly show that the NORR strains are similar to the other high bioactivation strains previously described, but they lack their methodological disadvantages. We have tested six insecticides, which are characterised by having contradictory results in other genotoxicity tests, using both the standard and the high bioactivation (NORR) cross. The six insecticides analysed are the pyrethroid allethrin, the methylenedioxyphenolic compound piperonyl butoxide, the chlorinated hydrocarbons dieldrin and endrin, and the organophosphates dimethoate and malathion. We obtained negative results for all six compounds. Our results show the suitability of the wing spot test for the evaluation of compounds at the first level of genotoxicity testing.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2013","Sugeng, A. J., Beamer, P. I., Lutz, E. A., Rosales, C. B.","Hazard-ranking of agricultural pesticides for chronic health effects in Yuma County, Arizona","","463-464:35-41","cb33c830-d0d1-4490-ba5d-1267fe7b4c5c","","With thousands of pesticides registered by the United States Environmental Protection Agency, it not feasible to sample for all pesticides applied in agricultural communities. Hazard-ranking pesticides based on use, toxicity, and exposure potential can help prioritize community-specific pesticide hazards. This study applied hazard-ranking schemes for cancer, endocrine disruption, and reproductive/developmental toxicity in Yuma County, Arizona. An existing cancer hazard-

ranking scheme was modified, and novel schemes for endocrine disruption and reproductive/developmental toxicity were developed to rank pesticide hazards. The hazard-ranking schemes accounted for pesticide use, toxicity, and exposure potential based on chemical properties of each pesticide. Pesticides were ranked as hazards with respect to each health effect, as well as overall chronic health effects. The highest hazard-ranked pesticides for overall chronic health effects were maneb, metam-sodium, trifluralin, pronamide, and bifenthrin. The relative pesticide rankings were unique for each health effect. The highest hazard-ranked pesticides differed from those most heavily applied, as well as from those previously detected in Yuma homes over a decade ago. The most hazardous pesticides for cancer in Yuma County, Arizona were also different from a previous hazard-ranking applied in California. Hazard-ranking schemes that take into account pesticide use, toxicity, and exposure potential can help prioritize pesticides of greatest health risk in agricultural communities. This study is the first to provide pesticide hazard-rankings for endocrine disruption and reproductive/developmental toxicity based on use, toxicity, and exposure potential. These hazard-ranking schemes can be applied to other agricultural communities for prioritizing community-specific pesticide hazards to target decreasing health risk. Â© 2013 Elsevier B.V.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2007","Clark, C.","Head lice treatments and advice","","279(7465):185-186","e7701279-ea35-45f3-8379-db35ec3cfe2a","","","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2015","Liu, G., Peng, Z., Lan, T., Xu, X., Huang, G., Yu, S., Liu, G., Li, J.","[Health risk assessment on pesticide residues in drinking water in Shenzhen]","Wei sheng yan jiu = Journal of hygiene research","44(2):264-9","36eb0d43-fbd5-49e4-a2b5-587d7d8b66a4","","OBJECTIVE: To conduct a health risk assessment of pesticide residues and its annual trend analysis in drinking water in Shenzhen City. METHODS: The water quality monitoring data of product water, pipe water and secondary supply water during from 2011 to 2013 were collected and analyzed. The risk evaluation models recommended by the U. S. Environmental Protection Agency (USEPA) were employed to perform health risk assessments for children and adults on the 12 non-carcinogenic materials (namely, heptachlor, pentachlorophenol, hexachlorocyclohexane, hexachlorobenzene, DDT, malathion, glyphosate, dimethoate, bentazone, atrazine, chlorothalonil, furadan). Results The results of the analysis for water quality from 84 factory samples, 11 peripheral samples and one secondary supply water sample showed that all of the measured indicators in the above mentioned water samples met the National Health Standards (GB 5749-2006) published by Ministry of Health of the People's Republic of China. The adults and children' s health indices (HIs) of the 12 non-carcinogenic materials were greater than 1 (2. 323 - 6. 312). Dimethoate in factory and peripheral water samples posed the largest risks of harm among the non-carcinogenic pollutants measured. And its HIi were also greater than 1 (1. 995 - 5. 094) and followed by hexachlorobenzene and heptachlor. Annual rising trend on health risk of the 12 pesticide residues indicated that their HIT on adults was 2323. 18 x 10(-3) in 2011, 2340. 18 x 10(-3) in 2012 and 2431. 97 x 10(-3) in 2013, and on children 2965. 07 x 10 (-3) in 2011, 2986. 77 x 10(-3) in 2012 and 3103. 93 x 10(-3) in 2013, respectively. This study also suggested that the average risk of peripheral water samples (HIT was equal to 2619. 64 x 10(-3) was greater than that of factory samples (HIT was same as 2366. 92 x 10(-3), and more children' s health risk than adults' risk. CONCLUSION: Health risks of pesticide residues in drinking water in

Shenzhen have exceeded the threshold value and dimethoate was the main hazard and more children's health risk than adults' risk. Furthermore, there was an annual rising slowly trend on health risks of pesticide residues in drinking water.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","1999","Koga, H., Yoshinaga, M., Aoyagi, K., Yagi, H., Iida, M., Fujishima, M.","Hemorrhagic panesophagitis after acute organophosphorus poisoning","Gastrointestinal endoscopy","49(5):642-3","cbede3cd-b46e-41f1-a498-e02078722839","","","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2015","Ãœnal, B., Ä°pekÃ§i, T., HoÅŸcan, M. B.","Histology of surgical margin of the radical perineal prostatectomy","","6(4)","d87c1e43-9392-4e76-8d79-b31e1df5a2d3","","","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2008","Colt, J. S., Gunier, R. B., Metayer, C., Nishioka, M. G., Bell, E. M., Reynolds, P., Buffler, P. A., Ward, M. H.","Household vacuum cleaners vs. the high-volume surface sampler for collection of carpet dust samples in epidemiologic studies of children","Environmental health : a global access science source","7:6","b9bf679e-e297-4d3e-8e52-a8baaf06d5a0","","BACKGROUND: Levels of pesticides and other compounds in carpet dust can be useful indicators of exposure in epidemiologic studies, particularly for young children who are in frequent contact with carpets. The high-volume surface sampler (HVS3) is often used to collect dust samples in the room in which the child had spent the most time. This method can be expensive and cumbersome, and it has been suggested that an easier method would be to remove dust that had already been collected with the household vacuum cleaner. However, the household vacuum integrates exposures over multiple rooms, some of which are not relevant to the child's exposure, and differences in vacuuming equipment and practices could affect the chemical concentration data. Here, we compare levels of pesticides and other compounds in dust from household vacuums to that collected using the HVS3. METHODS: Both methods were used in 45 homes in California. HVS3 samples were collected in one room, while the household vacuum had typically been used throughout the home. The samples were analyzed for 64 organic compounds, including pesticides, polycyclic aromatic hydrocarbons, and polychlorinated biphenyls (PCBs), using GC/MS in multiple ion monitoring mode; and for nine metals using conventional microwave-assisted acid digestion combined with ICP/MS. RESULTS: The methods agreed in detecting the presence of the compounds 77% to 100% of the time (median 95%). For compounds with less than 100% agreement, neither method was consistently more sensitive than the other. Median concentrations were similar for most analytes, and Spearman correlation coefficients were 0.60 or higher except for allethrin (0.15) and malathion (0.24), which were detected infrequently, and benzo(k)fluoranthene (0.55), benzo(a)pyrene (0.55), PCB 105 (0.54), PCB 118 (0.54), and PCB 138 (0.58). Assuming that the HVS3 method is the ""gold standard,"" the extent to which the household vacuum cleaner method yields relative risk estimates closer to unity by increasing random measurement error varies by compound and depends on the method used to calculate relative risk. CONCLUSION: The household vacuum cleaner method appears to be a reasonable alternative to the HVS3 for detecting, ranking, and quantifying the concentrations of pesticides and other compounds in carpet dust.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2013","Stubert, J., Dieterich, M., Gerber, B.","How radical should a mastectomy be?","","37(2):281-296","7951a63c-41f0-

4790-8cb4-ee94a26297b4","","The surgical treatment of breast cancer has elementary changed over the last three decades. Currently, mastectomy is only indicated in about 30% of all cases. Aesthetic issues are of rising interest today, even when mastectomy is indicated. New surgical strategies with performance of skin sparing procedures and preservation of the nipple areola complex allow an immediate reconstruction of the breast shape with excellent aesthetic results and less operative and mental patient's burden. If contraindications are well considered these surgical techniques are an oncologic safe alternative with realization of an individualized surgical breast cancer therapy.","","","RefMan","","","","","","","","",""
"Unknown","Unknown","Unknown","Unknown","","","2014","VallbÃ¶hmer, D., Knoefel, W. T.","How radical should the surgical therapy for gastric/cardia cancer be?","","139(1):23-27","3703c926-aedf-4cad-beb9-8152f7d1b2a2","","With the exception of tumours limited to the mucosa, surgical resection of the primary tumour and its local lymph node metastases still remains the sole option for a curative therapy for potentially resectable gastric cancer, as long as a complete tumour resection (R0 resection) can be performed. In this context, the extent of surgical radicality has been discussed over the last years, especially based on the following aspects: 1. extent of lymphadenectomy/need for splenectomy; 2. subtotal versus total gastrectomy; 3. surgical therapy for cardia cancer; 4. operative approach in cT4-tumours; 5. laparoscopic versus open surgery. Based on the recent study results as well as the current guidelines, this review will discuss these specific issues and gives an insight about the recommended surgical radicality in gastric cancer.Â©Georg Thieme Verlag KG Stuttgart.","","","RefMan","","","","","","","","",""
"Unknown","Unknown","Unknown","Unknown","","","2013","Goldner, W. S., Sandler, D. P., Yu, F., Shostrom, V., Hoppin, J. A., Kamel, F., LeVan, T. D.","Hypothyroidism and pesticide use among male private pesticide applicators in the agricultural health study","Journal of occupational and environmental medicine / American College of Occupational and Environmental Medicine","55(10):1171-8","65009f25-0c98-4060-881a-b1e575b5b933","","OBJECTIVE: Evaluate the association between thyroid disease and use of insecticides, herbicides, and fumigants/fungicides in male applicators in the Agricultural Health Study. METHODS: We examined the association between use of 50 specific pesticides and self-reported hypothyroidism, hyperthyroidism, and ""other"" thyroid disease among 22,246 male pesticide applicators. RESULTS: There was increased odds of hypothyroidism with ever use of the herbicides 2,4-D (2,4-dichlorophenoxyacetic acid), 2,4,5-T (2,4,5-trichlorophenoxyacetic acid), 2,4,5-TP (2,4,5-trichlorophenoxy-propionic acid), alachlor, dicamba, and petroleum oil. Hypothyroidism was also associated with ever use of eight insecticides: organochlorines chlordane, dichlorodiphenyltrichloroethane (DDT), heptachlor, lindane, and toxaphene; organophosphates diazinon and malathion; and the carbamate carbofuran. Exposure-response analysis showed increasing odds with increasing level of exposure for the herbicides alachlor and 2,4-D and the insecticides aldrin, chlordane, DDT, lindane, and parathion. CONCLUSION: There is an association between hypothyroidism and specific herbicides and insecticides in male applicators, similar to previous results for spouses.","","","RefMan","","","","","","","","",""
"Unknown","Unknown","Unknown","Unknown","","","2016","TopaktaÅŸ, R., Erdem, M. R., Polat, E. C., ErsÃ¶z, C., Ã-nol, Åž Y.","Iatrogenic rectal injury during radical prostatectomy: Is colostomy inevitable end?","","7(3)","b43b74e3-e5a8-4335-b0f9-16eb10282281","","Aim: Radical prostatectomy (RP) is the gold standard treatment method

for localized prostate cancer, because of its high oncological success. Iatrogenic rectal injury (IRI) during RP is rarely seen, but it may causes serious complications because of the close anatomic relationship between the prostate and rectum. Aim is to present our series about management of IRI without colostomy. Material and Method: Between June 1999 and June 2013, radical retropubic prostatectomy (RRP) was performed to 372 patients by a single surgeon. 10 cases (%2,6) were complicated by a rectal injury during RRP. Instant rectal closure was performed in 3 layers without a diverting colostomy, at the time of surgery. Omental vascular flap was placed between rectum and vesicourethral anastomosis. Results: The clinical stages of IRI cases were T1c, T2a and T2c in 2, 3 and 5 patients, respectively. Their preoperative Gleason scores were 6, 7 and 8 in 3, 5 and 2 patient, respectively. None of the 10 had undergone previous prostatic or rectal surgery, or received preoperative radiotherapy or hormonal therapy. Discussion: Instant diagnosis and rectal wall closures by three layers are essential for successful repair. Our technique seems as a safe, minimal invasive and highly effective option for the management of IRI.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2011","Baltaci GÃ¶ktaÅŸ, S., GÃ¼llÃ¼oÇ§lu, B. M., Åželimen, D.","Immediate or delayed breast reconstruction after radical mastectomy in breast cancer patients: Does it make a difference in the quality of life","","31(3):664-673","a694b891-0f53-4edd-a08a-340b4889f585","","Objective: Nowadays, most of the women with breast cancer are diagnosed in early stages and benefit from regional and systemic treatments with proven efficacy. Various methods of breast reconstruction can be applied to patients who undergo mastectomy at different times. The purpose of this study is to investigate how immediate or delayed breast reconstruction affected the patients' quality of life after mastectomy. Material and Methods: Breast cancer patients who had reconstructive surgery at any time after mastectomy were included in the study. Measures for evaluating the patients' psychopathological status (SCL-R90 Symptom checklist) and quality of life (EORTC QLQ-C 30) were used. Demographical and clinical data were obtained retrospectively from the patients and their hospital records. Demographical and clinical data were analyzed retrospectively, quality of life parameters were analyzed as descriptive statistics in a single time period. Patients who had undergo immediate (28 patients) or delayed (23 patients) breast reconstruction after mastectomy in Marmara University Hospital between January 1, 2002 and December 12, 2006 were included in the study. Results: When compared with the delayed reconstruction group, patients in the immediate reconstruction group were found to be at earlier stages and thus, there was less need for radiotherapy. Delayed reconstruction was mainly utilized in patients who received adjuvant therapy and axillary lymph node dissection. There was no difference between the two groups regarding their demographical characteristics. This study revealed that immediate reconstruction, when compared to delayed reconstructive surgery, improved patient's body image, self-esteem, and family/social relations. It also increased the quality of life psychologically, socially and spiritually as well as decreased somatic complaints. Conclusion: Immediate breast reconstruction after mastectomy in compared to delayed one, positively affects the individual's quality of life. Â© 2011 by TÃ¼rkiye Klinikleri.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2014","Josse, R., Sharanek, A., Savary, C. C., Guillouzo, A.","Impact of isomalathion on malathion cytotoxicity and genotoxicity in human HepaRG cells","Chemico-biological interactions","209:68-76","1466f64f-0046-4a81-8411-5a2474ccb303","","Isomalathion is a major impurity of

technical grade malathion, one of the most abundantly applied insecticides; however little is known about its hepatotoxicity. In the present study, cytotoxicity and genotoxicity of malathion and isomalathion either individually or in combination, were assessed using the metabolically competent human liver HepaRG cell line. Isomalathion reduced cell viability starting at a 100 muM concentration after a 24h exposure. It also significantly induced caspase-3 activity in a dose-dependent manner starting at 5 muM. On the contrary, even at concentrations as high as 500 muM malathion affected neither cell viability nor caspase-3 activity. Moreover, co-exposure of both compounds resulted in decreased toxicity of isomalathion. By contrast, malathion and isomalathion either separately or in combination, slightly induced micronuclei formation at low concentrations and had additive genotoxic effects when combined at 25 muM. Individually or combined isomalathion directly inhibited activity of carboxyesterases which are involved in detoxication of malathion. In addition, transcripts of CYP2B6 and CYP3A4, two CYPs responsible for malathion phase I metabolism, were strongly induced by the mixture while isomalathion alone only moderately decreased CYP1A2 and increased CYP2B6 transcripts. However, these CYPs were not altered at the protein or activity levels. Taken altogether, our results showed that isomalathion was much more cytotoxic than malathion while both compounds had comparable genotoxic effects in HepaRG hepatocytes at low concentrations and brought further support to the importance of considering impurities and interactions during evaluation of health risks of pesticides.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","1999","Tchernitchin, A. N., Tchernitchin, N. N., Mena, M. A., Unda, C., Soto, J.","Imprinting: perinatal exposures cause the development of diseases during the adult age","Acta biologica Hungarica","50(4):425-40","901ca3e9-aee9-43ac-ab7f-8656c467c3a2","","Since the early reports linking the development of clear cell cervicovaginal adenocarcinoma in young women with diethylstilbestrol treatment of their mothers during pregnancy, it became clear that perinatal exposure to several substances may induce irreversible alterations, that can be detected later in life. Current evidence suggests that these substances induce, by the mechanism of imprinting, alterations of the differentiation of several cell-types, resulting in the development of disease during the adult age. The most known delayed effects to prenatal exposure to agents displaying hormone action, pollutants, food additives and natural food components, substances of abuse and stress by the mechanism of imprinting are described. Among them, estrogens, androgens, progestins, lead, benzopyrenes, ozone, dioxins, DDT, DDE, methoxychlor, chlordecone, parathion, malathion, polychlorobiphenyls, pyrethroids, paraquat, food additives, normal food constituents, tetrahydrocannabinol, cocaine and opiates. It is concluded that perinatal exposure to several agents causes irreversible changes that determine health conditions during adulthood. Several diseases developing during adulthood probably were determined during early stages of life, under the effect of exposure or preferential mother's diet during pregnancy. Regulations to avoid these early exposures may contribute to an important improvement of health conditions of humankind.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2015","El-Baz, M. A. H., El-Deek, S. E. M., Sayed, A. A., Amin, A. F.","In utero pesticides exposure and generation of acute myloid leukemia associated translocation (8;21)","","282:164-165","364cda05-c60b-4a34-b1b2-6bd495294eb4","","Background: Although the etiology of childhood acute myeloid leukemia (AML) is not known, environmental and genetic contribution were reported. The

aim of this study was to detect the relationship between in utero-exposure to pesticides and development of acute myeloid leukemia (AML) associated translocation (8;21). Subject and methods: Cord blood and fetal meconium were collected from 190 subjects. Four Pesticides (DDT, Lindane, Diazinon, and Malathion) were detected in meconium by gas chromatography and mass-spectrometry (GC-MS). AML translocation (8;21) was detected by RT-PCR on RNA extracted from cord blood. Results: Thirty eight out of 190 (20%) of the cord blood samples were positive for the AML1-ETO translocation. The mean levels of the 4 tested pesticides were higher in meconium of the AML-ETO translocation carriers; P value is < 0.001 for DDT, and Malathion, 0.004 for Diazinone, and 0.042 for Lindane. Rural residents showed higher frequency of translocation detection than urban residents (P value = 0.007), they also expressed higher values of pesticides; P values are 0.04, 0.02, 0.04, and 0.01 for DDT, Lindane, Malathion, and Diazinon respectively. Maternal age, gestational age, birth weight and working status of the mothers showed no impact on the rate of translocation detection or pesticides levels. Conclusion: Pesticides exposure is potentially related to the occurrence of AML (8;21)translocation in cord blood of the apparently healthy newborn. Being rural resident seems to increase the possibility of exposure to pesticides; it subsequently imparts a higher risk for carrying such leukemia translocation. Strict regulation for pesticides uses is indicated.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2013","Navarrete-Meneses, M. P., Betancourt, M., Bonilla, E., Altamirano, M., Salas-LabadÃ-a, C., Reyes, A., PÃ©rez-Vera, P.","In vitro permethrin exposure-induced aberrations in MLL gene","","54:S44","df5c6776-e971-425c-959c-0650565244a5","","Introduction: Acute Lymphoblastic Leukemia (ALL) is a hematological malignancy characterized by the presence of chromosomal abnormalities. Translocations involving MLL gene have been detected in 80% of patients under one year old; it is proposed that they arise in utero and are associated with exposure to several agents, including pesticides. Epidemiological studies have shown a strong association between ALL development and pesticides exposure. However there is scarce biological evidence showing the potential of pesticides to induce leukemia-related abnormalities. The aim of this study was to detect alterations in MLL gene induced by permethrin and malathion in human lymphocytes in vitro. Method: Lymphocytes from two healthy volunteers were cultured for 72h and exposed to 200mM of permethrin and malathion for the last 24h. Solvents were used as negative controls. MLL gene was analyzed by FISH. Results: The complexity and heterogeneity of damage was increased by pesticides exposure. The number of abnormal cells tended to increase in cultures treated with malathion but was not statistically significant. Permethrin induced MLL damage (numerical+structural); the number of cells with numerical aberrations was higher, and diversity and complexity of structural abnormalities was also increased (p<0.05). Discussion: Aneuploidogen potential of permethrin has not been previously reported; here it was found that can induce numerical abnormalities and increase the diversity of structural aberrations, some of which have been observed in cells exposed to known leukemogenic agents (etoposide). Exposure to permethrin induced ALL-related aberrations that could promote the initial events in the development of this disease.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2004","Ruiz-Leal, M., George, S.","An in vitro procedure for evaluation of early stage oxidative stress in an established fish cell line applied to investigation of PHAH and pesticide toxicity","Marine environmental research","58(2-5):631-5","4cafb7e0-c444-409b-8ef1-

75e460f3141e","","Oxidative stress by increased production of reactive oxygen species such as superoxide has been implicated in the toxicity of PCB's and non-target toxicity of many pesticides. We report the development of a microplate-based method for determination of early stage oxidative stress using an established cell line (EPC) from a skin tumour of carp Cyprinus carpio L. and 2',7'-dichlorodihydrofluorescein diacetate (H(2)-DCFDA) as a fluorescent probe for detection of reactive oxygen species (ROS) formation. Sublethal concentrations of the herbicide Paraquat, an established redox cycling agent and a crude PCB mixture, Arochlor 1254 elicited a linear increase in ROS formation over 2 h exposure which was some 45- and 10-fold higher, respectively, than attributable to basal respiration, confirming the suitability and response of the test system. Whilst in vivo studies in mammals have implicated early stage oxidative stress in the toxicity of pesticides, we did not observe an increase in ROS production after exposure of EPC cells to sublethal concentrations of Carbaryl, 2,4-DDT, Lindane or Malathion implying that this is not the causative mechanism of acute toxicity in this fish cell line. The apparent involvement of oxidative stress in their mammalian toxicity may therefore be an indirect effect or dependent upon compound metabolism.","","","RefMan","","","","","","","","","","","Unknown","Unknown","Unknown","Unknown","","","1999","Blasiak, J., Jaloszynski, P., Trzeciak, A., Szyfter, K.","In vitro studies on the genotoxicity of the organophosphorus insecticide malathion and its two analogues","Mutation research","445(2):275-83","2251f391-a6ae-42e6-8922-bb8e640315f5","","Malathion [S-(1,2-dicarboethoxyethyl)O,O-dimethyl phosphorodithioate] is a commonly used organophosphorus insecticide reported to be genotoxic both in vivo and in vitro, but the reports are conflicting. In order to elucidate the genotoxic potency of the main compounds present in commercial preparations of malathion, the DNA-damaging effect of this insecticide, its major metabolite malaoxon [S-(1,2-dicarboethoxyethyl)O,O-dimethyl phosphorothiolate] and its isomer isomalathion [S-(1,2-dicarboethoxyethyl)O,S-dimethyl phosphorodithioate], all at purity of at least 99.8%, was investigated by use of the alkaline single cell gel electrophoresis (comet assay). Freshly isolated human peripheral blood lymphocytes were incubated with 25, 75 and 200 microM of the chemicals for 1 h at 37 degrees C. The concentrations used are comparable to those found in blood following various non-lethal human exposures to pesticides. Malathion did not cause any significant changes in the comet length of the lymphocytes, throughout the range of concentrations tested. Malaoxon and isomalathion introduced damage to DNA in a dose-dependent manner. The effect induced by malaoxon was more pronounced than that caused by isomalathion. Treated cells were able to recover within a 60-min incubation in insecticide-free medium at 37 degrees C except the lymphocytes exposed to malaoxon at 200 microM, which did not show measurable DNA repair. The latter result suggests a considerable cytotoxic effect (cell death) of malaoxon at the highest concentration used. The reported genotoxicity of malathion might, therefore, be a consequence of its metabolic biotransformation to malaoxon or the presence of malaoxon and/or isomalathion as well as other unspecified impurities in commercial formulations of malathion. In this regard, the results of our study clearly indicate that malathion used as commercial product, i.e., containing malaoxon and isomalathion, can be considered as a genotoxic substance in vitro. This means that it may also produce DNA disturbances in vivo, such as DNA breakage at sites of oncogenes or tumor suppressor genes, thus playing a role in the induction of malignancies in individuals exposed to this agent. Therefore, malathion can be regarded as a potential mutagen/carcinogen and requires

further investigation.","","","RefMan","","","","","","","","","","Unknown","Unknown","Unknown","Unknown","","","2013","Taxvig, C., Hadrup, N., Boberg, J., Axelstad, M., Bossi, R., Bonefeld-Jorgensen, E. C., Vinggaard, A. M.","In vitro-in vivo correlations for endocrine activity of a mixture of currently used pesticides","Toxicology and applied pharmacology","272(3):757-66","55d4476c-a620-4989-9edd-80a38b4f96bf","","Two pesticide mixtures were investigated for potential endocrine activity. Mix 3 consisted of bitertanol, propiconazole, and cypermethrin, and Mix 5 included malathion and terbuthylazine in addition to the three pesticides in Mix 3. All five single pesticides and the two mixtures were investigated for their ability to affect steroidogenesis in vitro in H295R cells. The pesticides alone and both mixtures affected steroidogenesis with both mixtures causing increase in progesterone and decrease in testosterone. For Mix 5 an increase in estradiol was seen as well, indicating increased aromatase activity. The two mixtures were also investigated in pregnant rats dosed from gestational day 7 to 21, followed by examination of dams and fetuses. Decreased estradiol and reduced placental testosterone were seen in dams exposed to Mix 5. Also a significant increase in aromatase mRNA-levels in female adrenal glands was found for Mix5. However, either of the two mixtures showed any effects on fetal hormone levels in plasma or testis, or on anogenital distance. Overall, potential aromatase induction was found for Mix 5 both in vitro and in vivo, but not for Mix 3, an effect likely owed to terbuthylazine in Mix 5. However, the hormonal responses in vitro were only partly reflected in vivo, probably due to some toxicokinetic issues, as the pesticide levels in the amniotic fluid also were found to be negatively affected by the number of compounds present in the mixtures. Nonetheless, the H295R assay gives hints on conceivable interference with steroidogenesis, thus generating hypotheses on in vivo effects.","","","RefMan","","","","","","","","","","Unknown","Unknown","Unknown","Unknown","","","2011","Bernhardt, V., D'Souza, J., Shantaram, M.","In vivo genetic damage induced by commercial Malathion and the antigenotoxic role of Withania somnifera","","11(2):78-84","46e92877-547d-47ae-9dc4-94c0cf83cd9e","","Commercial grade formulations of Malathion, a commonly used organophosphorus insecticide are reported to contain impurities such as Isomalathion and Malaoxon which increase the toxicity of commercial grade Malathion (CGM). In order to elucidate the genotoxic potency of CGM, its DNA-damaging effect was investigated by use of the comet assay. Trypan blue exclusion test was carried out to evaluate whether CGM causes cytotoxicity of the peripheral lymphocytes. We also evaluated the role of Withania somnifera L (WS) as an antigenotoxic agent that could reduce CGM induced genotoxicity. Therefore, Malathion can be regarded as a potential mutagen and carcinogen due to its DNA damaging effects and WS plays a role in reducing the genotoxic effects and thus can be used as a potent antigenotoxic compound. Our results suggest that Withaniacan be effective in preventing genotoxic effects of CGM. Â© IJIB, All rights reserved.","","","RefMan","","","","","","","","","","Unknown","Unknown","Unknown","Unknown","","","2013","Baspinar, S., Bircan, S., Devrim, T., Yavuz, G., Akdeniz, R., Oksay, T., Kosar, A.","Incidental prostate cancers found in radical cystoprostatectomy specimens","","33(1):33-38","20e61885-d841-42cb-96ae-aada961c62c1","","Objective: The aim of our study was to determine the incidence and clinicopathological features of incidental prostate carcinoma in patients who underwent radical cystoprostatectomy for bladder carcinoma. Material and Methods: Radical cystoprostatectomy materials of 59 patients with urothelial carcinoma were included in this study. There was no preoperative evidence of prostate carcinoma in any case. The

clinicopathological features of the bladder tumors and accompanying prostate carcinomas were obtained retrospectively from the pathology reports, and their relations were investigated. Results: Nine out of 59 (15.3%) cases had incidental prostate adenocarcinoma. The median age was significantly higher in cases with accompanying prostate adenocarcinoma (71.0) compared to those without (65.0) (p=0.012). Gleason scores of these cases were 6 in 8 (88.9%) cases and 7 (3+4) in 1 (11.1%) case and pathologic tumor (pT) stages were distributed as pT2a in 3 (33.3%) cases, pT2b in 1 (11.1%) case, pT2c in 3 (33.3%) cases, pT3a in 1 (11.1%) case, and pT3b in 1 (11.1%) case. Two (22.2%) out of 9 cases of co-existing prostate adenocarcinoma had low-grade, and 7 (77.8%) had high-grade urothelial carcinoma; their pT stages were distributed as pT1, pT2, pT3 and pT4 in 1(11.1%), 5 (55.6%), 1 (11.1%) and 2 (22.2%) cases, respectively. The pT stage of bladder carcinomas with accompanying prostate carcinomas tended to have a lower stage than the cases without prostate cancer, although the difference was not significant (p=0.057). Moreover, no significant relation was found regarding histologic grade (p=1.000). Conclusion: Accompanying prostate adenocarcinoma should be considered in patients who underwent cystoprostatectomy due to bladder tumor. We suggest further investigation of a relationship if any between prostate and bladder carcinoma in larger patient groups. Â© 2013 by TÃ¼rkiye Klinikleri.","","","RefMan","","","","","","","","","","","Unknown","Unknown","Unknown","Unknown","","","2013","Alavanja, M. C. R., Ross, M. K., Bonner, M. R.","Increased cancer burden among pesticide applicators and others due to pesticide exposure","","63(2):120-142","dc198457-9edf-4d00-bf98-d31959b03f55","","A growing number of well-designed epidemiological and molecular studies provide substantial evidence that the pesticides used in agricultural, commercial, and home and garden applications are associated with excess cancer risk. This risk is associated both with those applying the pesticide and, under some conditions, those who are simply bystanders to the application. In this article, the epidemiological, molecular biology, and toxicological evidence emerging from recent literature assessing the link between specific pesticides and several cancers including prostate cancer, non-Hodgkin lymphoma, leukemia, multiple myeloma, and breast cancer are integrated. Although the review is not exhaustive in its scope or depth, the literature does strongly suggest that the public health problem is real. If we are to avoid the introduction of harmful chemicals into the environment in the future, the integrated efforts of molecular biology, pesticide toxicology, and epidemiology are needed to help identify the human carcinogens and thereby improve our understanding of human carcinogenicity and reduce cancer risk. Â© 2013 American Cancer Society, Inc.","","","RefMan","","","","","","","","","","","Unknown","Unknown","Unknown","Unknown","","","1996","Pluth, J. M., Nicklas, J. A., O'Neill, J. P., Albertini, R. J.","Increased frequency of specific genomic deletions resulting from in vitro malathion exposure","Cancer research","56(10):2393-9","bf5c9c18-cdb1-497a-be5f-f4514c72917b","","Malathion is a widely used pesticide with high potential for human exposure. Epidemiological studies suggest that individuals with chronic environmental exposures to pesticides have increased risks of various hematological malignancies. The genotoxic data to date have been somewhat inconclusive with regard to malathion exposure. We have used a cell cloning assay to study the genotoxicity of in vitro exposure of human T lymphocytes to malathion. We exposed cells in G0 to doses of malathion ranging from 10 to 600 microg/ml. Mutant frequencies of treated samples showed both intra- and interindividual variability and, in some cases,

slight significant increases over the controls. Molecular analysis of hprt mutants resulting from both in vitro and an in vivo malathion exposure was performed by genomic multiplex PCR. In seven in vitro experiments (using cells from four different individuals) and one experiment on an individual exposed in vivo, one or more independent mutant(s) containing a partial deletion of exon 3 have been isolated from each individual. In five of the seven mutants, the deleted regions overlap extensively, revealing an area within exon 3 exceptionally prone to deletions upon exposure to malathion, This work provides the first evidence of an association between malathion exposure and specific mutations in human T lymphocytes. Additional work is necessary to determine the underlying molecular mechanism for these deletions and how this may relate to agricultural workers' increased risk of cancer.","","","RefMan","","","","","","","","","","Unknown","Unknown","Unknown","Unknown","","","2013","Finsterer, J., Ohnsorge, P.","Influence of mitochondrion-toxic agents on the cardiovascular system","","67(3):434-445","ac274c01-8102-4a73-a4cf-f056c785e658","","Cardiovascular disease may be induced or worsened by mitochondrion-toxic agents. Mitochondrion-toxic agents may be classified as those with or without a clinical effect, those which induce cardiac disease only in humans or animals or both, as prescribed drugs, illicit drugs, exotoxins, or nutritiants, as those which affect the heart exclusively or also other organs, as those which are effective only in patients with a mitochondrial disorder or cardiac disease or also in healthy subjects, or as solid, liquid, or volatile agents. In humans, cardiotoxic agents due to mitochondrial dysfunction include anthracyclines (particularly doxorubicin), mitoxantrone, cyclophosphamide, cisplatin, fluorouracil, imatinib, bortezomib, trastuzumab, arsenic trioxide, cyclosporine-A, zidovudine, lamotrigine, glycosides, lidocain, isoproterenol, nitroprusside, pivalic acid, alcohol, cocaine, pesticides, cadmium, mycotoxins, cyanotoxins, meat meal, or carbon monoxide. Even more agents exhibit cardiac abnormalities due to mitochondrion-toxicity only in animals or tissue cultures. The mitochondrion-toxic effect results from impairment of the respiratory chain, the oxidative phosphorylation, the Krebs cycle, or the Î²-oxidation, from decrease of the mitochondrion-membrane potential, from increased oxidative stress, reduced anti-oxidative capacity, or from induction of apoptosis. Cardiac abnormalities induced via these mechanisms include cardiomyopathy, myocarditis, coronary heart disease, arrhythmias, heart failure, or Takotsubo syndrome. Discontinuation of the cardiotoxic agent results in complete recovery in the majority of the cases. Antioxidants and nutritiants may be of additional help. Particularly coenzyme-Q, riboflavin, vitamin-E, vitamin-C, l-carnitine, vitamin-D, thiamin, folic acid, omega-3 fatty acids, and d-ribose may alleviate mitochondrial cardiotoxic effects. Â© 2013 Elsevier Inc.","","","RefMan","","","","","","","","","","Unknown","Unknown","Unknown","Unknown","","","2009","Toplak, N., AvÄ?in, T.","Influenza and autoimmunity","Ann. New York Acad. Sci.","1173:619-626","3b668ece-f2eb-4067-8502-35488c97545e","","Influenza infection can cause mild to severe illness and can even lead to death. The best way to prevent infection is vaccination against influenza. Complications of influenza infection are not only a consequence of acute infection but can also present as late autoimmune response. Influenza is not frequently implicated as a trigger for autoimmune diseases, but case reports of autoimmune adverse events have been published even following influenza vaccination. In this article we review published data on autoimmune diseases following influenza infection and vaccination. We also discuss immunity of influenza infection in connection to

pathogenesis of autoimmune response and autoimmune disease. Â© 2009 New York Academy of Sciences.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2008","Zabrodskii, P. F., Germanchuk, V. G., Mandych, V. G.","Inhibition of function of T cell subpopulations and decrease in cytokine production during subacute poisoning with various toxicants","Bulletin of experimental biology and medicine","146(2):234-6","801c2cc4-83e0-4586-8f61-b04cb72967b9","","Experiments on outbred albino rats showed that subacute intoxication with organophosphorus compounds dimethyldichlorovinyl phosphate and malathion primarily decreased functional activity of Th1 lymphocytes, immune reactions associated with these cells, and interferon-g production compared to that of Th2 lymphocytes and interleukin-4 synthesis. Acrylic acid nitrile and methanol produced the opposite effect. Sulfur mustard and sodium arsenite were equally potent in reducing the function of Th1 and Th2 lymphocytes and production of cytokines.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2010","Kooijman, R., Devos, S., Hooghe-Peters, E.","Inhibition of in vitro cytokine production by human peripheral blood mononuclear cells treated with xenobiotics: Implications for the prediction of general toxicity and immunotoxicity","","24(6):1782-1789","2563886c-c6cb-4e7c-841a-4773afbfec48","","The use of human peripheral blood mononuclear cells (PBMC) as an in vitro system to predict in vivo toxicity was investigated. For 58 chemicals, the effect on cytokine secretion (IL-5, IFNÎ³ and TNFÎ±) by phytohaemagglutinin-activated PBMC was measured, IC50 values were calculated and correlations of these endpoints with human LC50 values were determined.The best result was obtained with IFNÎ³ as an endpoint for which the calculated R2 value was 0.58 which is comparable with the R2 values for the classical neutral red uptake (NRU) assays using murine 3T3 cells and normal human keratinocytes (R2=0.56 and 0.59, respectively). When for each chemical the lowest IC50 value of the three endpoints was correlated with LC50 the calculated R2 increased slightly to 0.63.A specific strength of our test is that it corrects several outliers (diazepam, digoxin, malathion and verapamil hydrochloride) which do not fit in the linear regression analysis for IC50 values obtained with the classical 3T3 NRU assay. Furthermore, 2,4-dichlorophenoxyacetic acid, cyclosporine A and pentachlorophenol had a 10 times lower IC50 value than the estimated human LC50 value and were identified as immunotoxic alerts. In conclusion, new endpoints investigated in this study contribute to the prediction of immunotoxic effects and correct outliers of classical cytotoxicity assays. Â© 2010 Elsevier Ltd.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2013","Singh, S., Mann, B. K.","Insect bite reactions","","79(2):151-164","f49861f4-c277-49b1-921a-373253f66acd","","Insects are a class of living creatures within the arthropods. Insect bite reactions are commonly seen in clinical practice. The present review touches upon the medically important insects and their places in the classification, the sparse literature on the epidemiology of insect bites in India, and different variables influencing the susceptibility of an individual to insect bites. Clinical features of mosquito bites, hypersensitivity to mosquito bites Epstein-Barr virus NK (HMB-EBV-NK) disease, eruptive pseudoangiomatosis, Skeeter syndrome, papular pruritic eruption of HIV/AIDS, and clinical features produced by bed bugs, Mexican chicken bugs, assassin bugs, kissing bugs, fleas, black flies, Blandford flies, louse flies, tsetse flies, midges, and thrips are discussed. Brief account is presented of the immunogenic components of mosquito and bed bug saliva. Papular urticaria is discussed including its epidemiology,

the 5 stages of skin reaction, the SCRATCH principle as an aid in diagnosis, and the recent evidence supporting participation of types I, III, and IV hypersensitivity reactions in its causation is summarized. Recent developments in the treatment of pediculosis capitis including spinosad 0.9% suspension, benzyl alcohol 5% lotion, dimethicone 4% lotion, isopropyl myristate 50% rinse, and other suffocants are discussed within the context of evidence derived from randomized controlled trials and key findings of a recent systematic review. We also touch upon a non-chemical treatment of head lice and the ineffectiveness of egg-loosening products. Knockdown resistance (kdr) as the genetic mechanism making the lice nerves insensitive to permethrin is discussed along with the surprising contrary clinical evidence from Europe about efficacy of permethrin in children with head lice carrying kdr-like gene. The review also presents a brief account of insects as vectors of diseases and ends with discussion of prevention of insect bites and some serious adverse effects of mosquito coil smoke.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","1999","Ghosh, D., Dhadwal, D., Aggarwal, A., Mitra, S., Garg, S. K., Kumar, R., Kaur, B.","Investigation of an epidemic of Reye's syndrome in northern region of India","Indian pediatrics","36(11):1097-106","6400b5f6-e10d-4c95-be16-51542c129e96","","OBJECTIVE: To determine the extent, epidemiological and clinical features of an epidemic of non-inflammatory encephalopathy in northern region of India. DESIGN: Surveillance of referred cases having unconsciousness after a short bout of fever during October and November 1997. Case control study in 7 most affected villages. METHODS: Active case finding was done to assess the extent and severity of the epidemic by interviewing health professionals and by reviewing mortality records in 10 districts of Haryana, Punjab and Chandigarh. A house to house survey was conducted in seven most affected villages. A case was defined as any child of less than 15 years of age, who had prodromal fever followed by vomiting and unconsciousness with subsequent recovery or death. Two age and sex matched controls who had fever without unconsciousness were taken for each case, one from nearby house and another staying furthest from the affected house. These groups were compared for various epidemiologic factors, clinical features and treatment pattern. Residual medicines used by affected patients were tested for presence of salicylate. Local village practitioners were interviewed for their knowledge and attitude towards use of aspirin in a febrile child. RESULTS: Information regarding 129 affected children (M: F=1 : 1) could be obtained. Age ranged between 1 to 12 years (mean 5.8 years). Most were from rural or semi-suburban areas. Attack rate was 5.4/1000 and case fatality rate was 72%. Multiple sibs were affected in 9.3%. History of fever was reported by 83%, vomiting preceding unconsciousness by 83% and abnormal behavior by 65%. Abnormal posturing was reported in 55%. Seventeen (61%) of 28 samples had IgM antibodies in serum/CSF against measles. Twelve (36%) of 33 serum samples tested positive for Varicella zoster virus. None gave history of aspirin intake and 10 samples of residual drugs did not contain salicylate. However, 6 out of 19 blood samples taken from affected patients contained salicylate. Environmental factors were in favor of Japanese encephalitis (JE) but brain biopsy and serology disproved it. Based on earlier report of JE from this area, the cases in present epidemic were being reported as JE before this study was undertaken. Intensive fogging with malathion was being undertaken as antimosquito measure, specially around the affected houses. Local village practitioners (n = 37) were unaware of contraindications of aspirin in a febrile child. CONCLUSION: Measles and varicella zoster emerged as the probable etiologies for the viral prodrome

precipitating these cases of Reye's syndrome. Aspirin might have a contributory role. Malathion is another putative cofactor.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2010","DaniÅŸ, O., Demir, S., YÃ¼ce-Dursun, B., GÃ¼ndÃ¼z, C., Bulut, M.","The investigation of antioxidative and radical scavenging effects of various coumarin derivatives","","35","4ef11030-d66c-4961-9c30-e7ff49e8169f","","A redox imbalance in a healthy living system leads to malfunctioning of cells that ultimately results in various diseases, including cancer, neurological degeneration, and arthritis as well as accelerating the aging process. Therefore, therapeutic strategies should aim at reducing free-radical formation and scavenging free radicals. Free radicals and other reactive oxygen species, collectively known as ROS are generated continuously via normal physiological processes and more so in pathological conditions. Coumarins are a very large group of 1,2-benzopyrones derivatives that are widely distributed in a variety of natural plant sources and have been found to exhibit a variety of biological and pharmacological activities and have raised considerable interest because of their potential beneficial effects on human health. Very few systematic studies have been reported on structure-antioxidant activity correlations in coumarins. The twenty coumarins bearing different functionalities such as amino, hydroxy, methoxy, acetoxy and nitro have been synthesized and confirmed on the basis of their spectral data. They were examined for the first time for their effect on radical scavenging, Cu2+ and Fe3+ reducing and metal chelating activity, in order to establish structure activity relationship. The results were compared with standard antioxidants such as trolox, Î±-tocopherol and ascorbic acid. Our studies demonstrated that ortho dihydroxy coumarins were found to possess the highest antioxidant and radical scavenging
activities.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2016","Ã-zgÃ¶r, F., KÃ¼Ã§Ã¼ktopÃ§u, O., Åžahan, M., ÅžimÅŸek, A., BerberoÄŸlu, A. Y., SarÄ±lar, Ã-, Savun, M., GÃ¼rbÃ¼z, Z. G.","Is there a concordance between the gleason scores of needle biopsy and radical prostatectomy specimens in prostatic carsinoma?","","54(1):32-35","ca085d2c-88f3-4add-820f-a0252b70c8e1","","Aim: To evaluate the concordance between the Gleason Scores (GS) of prostate biopsy and radical prostatectomy specimens. Methods: Prostate biopsy was performed in 1135 patients with the suspicion of prostate cancer in our clinic between 2008 and 2012. A total of 366 patients were diagnosed with prostate cancer. Radical prostatectomy was performed in 73 of these patients and GS of pathology specimens were included in this study for comparison. The patients were divided into three groups (low intermediate- and high-risk patients) according to the Dâ€™amico risk classification for prostate cancer. Results: The median age of the patients was 64.2Â±6.1 years (54-73). The mean prostate specific antigen level was 20.34 ng/mL and the mean biopsy core number was 12Â±0.58. A statistically significant concordance was detected between the GS of biopsy specimens and radical prostatectomy materials in 65.7% of patients (p<0.01). There were 40 patients in the low-risk group, however, 8 (20%) of them were identified to be intermediate-risk patients and one (2.5%) was found to be a high-risk patient after radical prostatectomy. Conclusion: Concordance between the GS of prostate biopsy and radical prostatectomy materials are important for selection of the appropriate treatment.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2010","Rutman, H.","Ivermectin versus malathion for head lice","","362(25):2426-2427","f5aa1e7e-a737-4c89-961f-5a3bc58ea39c","","","","","RefMan","","","","","","","","","","

"Unknown","Unknown","Unknown","Unknown","","","2012","Staley, Z. R., Senkbeil, J. K., Rohr, J. R., Harwood, V. J.","Lack of direct effects of agrochemicals on zoonotic pathogens and fecal indicator bacteria","Applied and environmental microbiology","78(22):8146-50","a48c8c19-e80f-4c2c-92a2-1bb60b22cdef","","Agrochemicals, fecal indicator bacteria (FIB), and pathogens frequently contaminate water simultaneously. No significant direct effects of fertilizer, atrazine, malathion, and chlorothalonil on the survival of Escherichia coli, Enterococcus faecalis, Salmonella enterica, human polyomaviruses, and adenovirus were detected, supporting the assertion that previously observed effects of agrochemicals on FIB were indirect.","","","RefMan","","","","","","","","","",""
"Unknown","Unknown","Unknown","Unknown","","","2012","Hoppin, J. A., Long, S., Umbach, D. M., Lubin, J. H., Starks, S. E., Gerr, F., Thomas, K., Hines, C. J., Weichenthal, S., Kamel, F., Koutros, S., Alavanja, M., Beane Freeman, L. E., Sandler, D. P.","Lifetime organophosphorous insecticide use among private pesticide applicators in the Agricultural Health Study","Journal of exposure science & environmental epidemiology","22(6):584-92","860eb8b7-10bb-4fdf-a41c-4c658cd7452a","","Organophosphorous insecticides (OPs) are the most commonly used insecticides in US agriculture, but little information is available regarding specific OP use by individual farmers. We describe OP use for licensed private pesticide applicators from Iowa and North Carolina in the Agricultural Health Study (AHS) using lifetime pesticide use data from 701 randomly selected male participants collected at three time periods. Of 27 OPs studied, 20 were used by >1%. Overall, 95% had ever applied at least one OP. The median number of different OPs used was 4 (maximum=13). Malathion was the most commonly used OP (74%) followed by chlorpyrifos (54%). OP use declined over time. At the first interview (1993-1997), 68% of participants had applied OPs in the past year; by the last interview (2005-2007), only 42% had. Similarly, median annual application days of OPs declined from 13.5 to 6 days. Although OP use was common, the specific OPs used varied by state, time period, and individual. Much of the variability in OP use was associated with the choice of OP, rather than the frequency or duration of application. Information on farmers' OP use enhances our ability to characterize and understand the potential health effects of multiple OP exposures.","","","RefMan","","","","","","","","","",""
"Unknown","Unknown","Unknown","Unknown","","","2006","","Lindane: Serious neurological effects","","15(82):61","dba2f4f6-5261-4167-8717-aa8af1e988f6","","â€¢ Cutaneous application of lindane carries a risk of systemic adverse effects, including serious neurological disorders. Lindane is readily absorbed through the skin, especially damaged skin and in children. â€¢ In practice, lindane has no place in the treatment of either lice or scabies.","","","RefMan","","","","","","","","","",""
"Unknown","Unknown","Unknown","Unknown","","","2007","Bonner, M. R., Coble, J., Blair, A., Beane Freeman, L. E., Hoppin, J. A., Sandler, D. P., Alavanja, M. C.","Malathion exposure and the incidence of cancer in the agricultural health study","American journal of epidemiology","166(9):1023-34","2bb23285-36fe-4bcb-9c9c-f80faefdf4dc","","Malathion is the most common organophosphate insecticide applied in the United States, and while some studies suggest that it may be clastogenic, its carcinogenicity has not been demonstrated in rodents. However, malathion has been associated with non-Hodgkin's lymphoma in several epidemiologic studies. The authors investigated associations between malathion exposure and cancer among 19,717 pesticide applicators enrolled in the Agricultural Health Study between 1993 and 1997.

Information on lifetime years and days per year of use and intensity of malathion exposure was obtained with self-administered questionnaires prior to the onset of any cancer. The average follow-up time was 7.5 years (1993-2002). Rate ratios and 95% confidence intervals were calculated using Poisson regression, adjusting for potential confounders. Overall, lifetime days of malathion use (top tertile of exposure, >39 days) was not associated with all cancers combined (rate ratio = 0.97, 95% confidence interval: 0.81, 1.15). The risk of non-Hodgkin's lymphoma was not associated with malathion use, although the number of cases was small. The risk of melanoma with more than 39 lifetime exposure-days was 0.39 (95% confidence interval: 0.14, 1.03). In summary, malathion exposure was not clearly associated with cancer at any of the sites examined. Although the rate ratios for melanoma were reduced, small numbers and lack of experimental evidence suggest that the observed reductions may have arisen by chance.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2010","Moore, P. D., Yedjou, C. G., Tchounwou, P. B.","Malathion-induced oxidative stress, cytotoxicity, and genotoxicity in human liver carcinoma (HepG2) cells","","25(3):221-226","9fd252b4-7826-4e5d-b140-31159c9f7365","","Malathion is an organophosphate pesticide that is known for its high toxicity to insects and low to moderate potency to humans and other mammals. Its toxicity has been associated with the inhibition of acetylcholinesterase activity, leading to the interference with the transmission of nerve impulse, accumulation of acetylcholine at synaptic junctions, and subsequent induction of adverse health effects including headache, dizziness, nausea, vomiting, bradycardia, and miosis. Oxidative stress (OS) has been reported as a possible mechanism of malathion toxicity in humans. Hence, the aim of this study was to examine the role of OS in malathion-induced cytotoxicity and genotoxicity. To achieve this goal, MTT, lipid peroxidation, and single cell gel electrophoresis (Comet) assays were performed, respectively, to evaluate the levels of cell viability, malondialdehyde (MDA) production, and DNA damage in human liver carcinoma (HepG2) cells. Study results indicated that malathion is mitogenic at lower levels of exposure, and cytotoxic at higher levels of exposure. Upon 48 h of exposure, the average percentages of cell viability were 100% Â± 11%, 117% Â± 15%, 86% Â± 15%, 35% Â± 9%, and 27% Â± 7% for 0, 6, 12, 18, and 24 mM, respectively. In the lipid peroxidation assay, the concentrations of MDA produced were 12.55 Â± 0.16, 20.65 Â± 0.27, 31.1 Â± 0.40, 34.75 Â± 0.45, and 15.1 Â± 0.20 Î¼M in 0, 6, 12, 18, and 24 mM malathion, respectively. The Comet assay showed a significant increase in DNA damage at the 24 mM malathion exposure. Taken together, our results indicate that malathion exposure at higher concentrations induces cytotoxic and genotoxic effects in HepG2 cells, and its toxicity may be mediated through OS as evidenced by a significant production of MDA, an end product of lipid peroxidation. Â© 2009 Wiley Periodicals, Inc.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2015","Geng, X., Shao, H., Zhang, Z., Ng, J. C., Peng, C.","Malathion-induced testicular toxicity is associated with spermatogenic apoptosis and alterations in testicular enzymes and hormone levels in male Wistar rats","Environmental toxicology and pharmacology","39(2):659-67","6d3d3672-c50c-42c6-8137-9b88579cd301","","Malathion has a broad range of toxicities while its reproductive effects have not been fully elucidated. In this study, we treated animals with malathion by gavage at doses of 0, 33.75, 54, and 108 mg/kg for 60 days and evaluated the alterations in histology, biochemistry and serology. Malathion caused the reduction in the sperm counts and motility. The reduced body and testis weights were

coupled with mild to severe degenerative changes in seminiferous tubules. We found malathion at 54 mg/kg increased spermatogenic apoptosis rate which was confirmed by changes in protein expression of Bax and Bcl-2. The activities of testicular enzymes including ACP, LDH and gamma-GT were significantly altered with the reduced level of reproductive hormones such as LH, FSH and T. These results indicate that malathion can elicit deleterious effects on reproductive system of rats. The abnormal levels of hormones and apoptotic proteins induced by malathion may play important roles.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2012","Alfaro-Lira, S., Pizarro-Ortiz, M., Calaf, G. M.","Malignant transformation of rat kidney induced by environmental substances and Estrogen","","9(5):1630-1648","71b0a368-0c7f-45d4-8632-cc5d9a626aa3","","The use of organophosphorous insecticides in agricultural environments and in urban settings has increased significantly. The aim of the present study was to analyze morphological alterations induced by malathion and 17Î²-estradiol (estrogen) in rat kidney tissues. There were four groups of animals: control, malathion, estrogen and combination of both substances. The animals were injected for five days and sacrificed 30, 124 and 240 days after treatments. Kidney tissues were analyzed for histomorphological and immunocytochemical alterations. Morphometric analysis indicated that malathion plus estrogen-treated animals showed a significantly ($p < 0.05$) higher grade of glomerular hypertrophy, signs of tubular damage, atypical proliferation in cortical and hilium zone than malathion or estrogen alone-treated and control animals after 240 days. Results indicated that MFG, ER-Î± ER-Î², PgR, CYP1A1, Neu/ErbB2, PCNA, vimentin and Thrombospondin 1 (THB) protein expression was increased in convoluted tubules of animals treated with combination of malathion and estrogen after 240 days of 5 day treatment. Malignant proliferation was observed in the hilium zone. In summary, the combination of malathion and estrogen induced pathological lesions in glomeruli, convoluted tubules, atypical cell proliferation and malignant proliferation in hilium zone and immunocytochemical alterations in comparison to control animals or animals treated with either substance alone. It can be concluded that an increased risk of kidney malignant transformation can be induced by exposure to environmental and endogenous substances. Â© 2012 the authors; licensee MDPI, Basel, Switzerland.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","1999","Beaman, J. R., Finch, R., Gardner, H., Hoffmann, F., Rosencrance, A., Zelikoff, J. T.","Mammalian immunoassays for predicting the toxicity of malathion in a laboratory fish model","Journal of toxicology and environmental health. Part A","56(8):523-42","4c9fd82f-8a01-4ace-bd78-93d92a74a747","","This study describes the use of a panel of immune assays, originally developed by the National Toxicology Program for assessing xenobiotic-induced immunotoxicity in mice, to quantify the effects of sublethal malathion exposure on the immune responses of fish. For this study, Japanese medaka (Oryzias latipes) were exposed subchronically to the organophosphate pesticide malathion in a series of two experiments. In the first set of studies, fish were exposed for 7 or 14 d to untreated well water (i.e., controls) or to waterborne malathion at 0.2 or 0.8 mg/L. Following exposure, fish from each group were sacrificed and their kidneys (primary organ of leukopoiesis in fish and equivalent to mammalian bone marrow) were used to provide cells for assessing any malathion-induced effects upon nonspecific and acquired immune defense mechanisms. Effects upon humoral-mediated immunity were determined by enumerating antibody plaque-forming cell (PFC) numbers from a subset of fish exposed to

malathion for 14 d and then injected intraperitoneally (ip) with sheep erythrocytes (sRBC). Results of these studies demonstrated that while malathion exposure had no significant effect upon hematocrit/leukocrit values or upon mitogen-stimulated T-cell lymphoproliferation, PFC numbers in the kidney of exposed fish were significantly reduced (compared to control fish) in a dose-dependent manner. In addition, total recoverable kidney cell numbers and viability, as well as superoxide anion production by kidney phagocytes, were reduced slightly (compared to control values) in fish exposed for 14 d to the highest malathion concentration tested. In the second set of experiments, medaka exposed for up to 21 d to either 0.1 or 0.3 mg malathion/L were challenged ip with an LD50 dose of the bacterial fish pathogen Yersinia ruckeri. Results from these infectivity studies demonstrated that exposure to either malathion concentration, for 14 or 21 d reduced host resistance against Yersinia infection. Taken together, these findings demonstrate the applicability of mammalian immune assays for predicting malathion-induced immunosuppression in a teleost fish, as well as the potential utility of a small laboratory fish to serve as an alternate model for mammals in immunotoxicological studies.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2012","Manikam, L., Rogstad, K., Singh, G., Lakhanpaul, M.","Management of sexually transmitted infections in pubertal children","","97(4):132-142","351b9b41-a8e4-4887-957f-1cad9f81a02a","","Sexually transmitted infections (STI) comprise a variety of infections transmissible through sexual contact. Mutually consenting sexual relationships have become commonplace in adolescence and sexual abuse or exploitation awareness has risen, resulting in increased presentations of children with sexual health concerns. Difficulties persist in diagnosing and managing STIs in children. With increased emphasis on paediatrician's involvement in transitional care, competence in sexual history taking and clinical presentation recognition remains essential. Additionally, an awareness of strengths and limitations of diagnostic modalities needs to be present. Furthermore, specific additional issues in this age group such as independent consent for diagnosis and treatment, fear of pregnancy and privacy and confidentiality concerns should be addressed carefully. Failure to address these issues may lead to disengagement with health services resulting in potentially adverse short- and long-term health and social consequences in young persons. This review aims to provide an overview of an approach to diagnosing and managing a pubertal child with an STI and the consideration of the unique issues surrounding children's care.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2008","Hotz, H. C., Buhr, H. J.","Management of thyroid nodule from the surgeon's point of view","","150(14):35-37","399c597b-cdfe-4ed2-bb8a-4722c07df6a4","","","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2014","Karami-Mohajeri, S., Hadian, M. R., Fouladdel, S., Azizi, E., Ghahramani, M. H., Hosseini, R., Abdollahi, M.","Mechanisms of muscular electrophysiological and mitochondrial dysfunction following exposure to malathion, an organophosphorus pesticide","Human & experimental toxicology","33(3):251-63","115ac06b-c1f3-4463-a72b-353f97350a00","","Muscle dysfunction in acute organophosphorus (OP) poisoning is a cause of death in human. The present study was conducted to identify the mechanism of action of OP in terms of muscle mitochondrial dysfunction. Electromyography (EMG) was conducted on rats exposed to the acute oral dose of malathion (400 mg/kg) that could inhibit acetylcholinesterase activity up to 70%. The function of mitochondrial respiratory chain and the rate of

production of reactive oxygen species (ROS) from intact mitochondria were measured. The bioenergetic pathways were studied by measurement of adenosine triphosphate (ATP), lactate, and glycogen. To identify mitochondrial-dependent apoptotic pathways, the messenger RNA (mRNA) expression of bax and bcl-2, protein expression of caspase-9, mitochondrial cytochrome c release, and DNA damage were measured. The EMG confirmed muscle weakness. The reduction in activity of mitochondrial complexes and muscular glycogen with an elevation of lactate was in association with impairment of cellular respiration. The reduction in mitochondrial proapoptotic stimuli is indicative of autophagic process inducing cytoprotective effects in the early stage of stress. Downregulation of apoptotic signaling may be due to reduction in ATP and ROS, and genotoxic potential of malathion. The maintenance of mitochondrial integrity by means of artificial electron donors and increasing exogenous ATP might prevent toxicity of OPs.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","1995","Rodriguez-Ariza, A., Diaz-Mendez, F. M., Navas, J. I., Pueyo, C., Lopez-Barea, J.","Metabolic activation of carcinogenic aromatic amines by fish exposed to environmental pollutants","Environmental and molecular mutagenesis","25(1):50-7","5f30b6e9-c039-40a9-aec5-aea4deaed547","","Activation of arylamines to mutagenic metabolites by hepatic S9 fractions has been evaluated as a biomaker of fish exposure to pollutants, using gilthead seabream (Sparus aurata), a valuable fish species from the Spanish South Atlantic littoral, as model organism. To obtain maximal sensitivity to the mutagenic action of aromatic amines, a strain of Salmonella typhimurium overproducing O-acetyltransferase was used. Fish were treated with Aroclor 1254, pesticides (malathion and dieldrin), or copper(II), and compared to Aroclor 1254-treated rats. The promutagen activation capabilities of the S9 fractions were further characterized by studying the effect of two monooxygenase inhibitors, alpha-naphthoflavone, a well known inhibitor of aromatic hydrocarbon-inducible forms of cytochrome P450, and methimazole, a substrate for the flavin monooxygenase (FMO) system. This study shows that 2-aminoanthracene (2-AA) and 2-acetylaminofluorene (AAF) activation by gilthead liver is enhanced by treatment of fish with different xenobiotics. The catalyst responsible for this enhanced activation appears to be different for each promutagen and, at least for 2-AA, dependent on the type of xenobiotic. The data presented indicate further that treatment of gilthead with some compounds, such as malathion and dieldrin, enhances the activation of aromatic amines in liver, without inducing ethoxyresorufin-O-deethylase activity. The use of acetyltransferase-overproducing bacteria appears to be a useful tool in the study of arylamine activation by fish liver, where biotransformation capability is lower than in mammals.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2000","Vargas, R. I., Stark, J. D., Kido, M. H., Ketter, H. M., Whitehand, L. C.","Methyl eugenol and cue-lure traps for suppression of male oriental fruit flies and melon flies (Diptera: Tephritidae) in Hawaii: effects of lure mixtures and weathering","Journal of economic entomology","93(1):81-7","67340511-61b6-4228-b581-b655ca03595d","","Methyl eugenol (4-allyl-1,2-dimethoxybenzene-carboxylate) and cue-lure [4-(p-acetoxyphenyl)-2-butanone] are highly attractive kairomone lures to oriental fruit fly, Bactrocera dorsalis (Hendel), and melon fly, B. cucurbitae (Coquillett), respectively. Plastic bucket traps were evaluated as dispensers for methyl eugenol and cue-lure for suppression of the 2 fruit flies in Hawaii. Methyl eugenol and cue-lure mixtures were compared with pure methyl eugenol or cue-lure over 4 seasons. B. dorsalis captures differed significantly

with treatment and season. B. dorsalis captures with 100% methyl-eugenol were significantly greater than all other treatments (25, 50, and 75%). B. cucurbitae captures also differed significantly with treatment but not with season. Captures with 100, 75, and 50% cue-lure were not significantly different. Bucket traps baited with cue-lure (+ malathion) and weathered under Hawaiian climatic conditions were attractive to B. cucurbitae up to 8 wk. Two methyl eugenol dispensers (canec disks and Min-U-Gel) were compared with bucket traps. Dispensers (methyl eugenol + malathion) were weathered for 2-16 wk under Hawaiian climatic conditions and bioassayed during summer and winter. Initially, captures of B. dorsalis were not significantly different for the 3 dispensers. Bucket traps and canec disks were most resistant to weather, remaining attractive to B. dorsalis flies up to 16 wk. Min-U-Gel was least resistant, losing attractiveness to B. dorsalis flies within 2 wk. On the basis of performance, bucket traps and canec disks were equally long-lived up to 14 wk; thereafter, bucket traps were slightly more attractive during winter. Canec disks were cheapest, but on the basis of possible environmental concerns, bucket traps may be the best all-around choice for areawide suppression of fruit flies.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2015","Ã‡olak, E., AlÄ±cÄ±, Ã-
","Modified radical mastectomy under local anesthesia in high-risk male breast cancer","","11(2):98-100","a03cce1f-0c21-4977-884c-d7b8840efd9c","","Carcinoma of the male breast is responsible for less than 1% of all malignancies in men, but the prognosis is poor. Being diagnosed at an older age and advanced stage both affect the prognosis. Surgical treatment of elderly patients with co-morbid diseases is challenging. Unfortunately, these patients do not receive chemotherapy due to poor overall status. Mastectomy with local anesthesia may be an option for these patients. We aimed to present an elderly male patient who underwent successful mastectomy and axillary dissection under local anesthesia.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","1998","Pluth, J. M., O'Neill, J. P., Nicklas, J. A., Albertini, R. J.","Molecular bases of hprt mutations in malathion-treated human T-lymphocytes","Mutation research","397(2):137-48","23233d0f-c032-45e9-a252-7929237b96b2","","Recently, we reported that 6 of 84 (7.1%) hprt mutants arising in in vitro malathion-treated human T-lymphocytes were characterized by specific genomic deletions in a 125-bp region of exon 3 (Pluth et al., Cancer Research 56 (1996) 2393-2399. We have now extended study to determine whether additional differences in molecular spectrum at a basepair level exist between control and malathion-treated mutations, and investigated whether there is evidence to support the hypothesis that malathion is an alkylating agent. We analyzed 101 hprt mutants (24 from control and 77 from treated cultures) isolated form six in vitro malathion exposures of T-lymphocytes from four healthy male donors. Analysis consisted of: Southern blotting, genomic multiplex PCR, genomic DNA sequencing and reverse transcription of PCR amplification (RT/PCR) and sequencing of the cDNA product. Mutations at several basepair sites were frequent after malathion exposure and were isolated from treated cells from at least two different individuals. Using a human hprt mutation database for comparison, the frequency of mutations at one of these sites (basepair 134) was found to be significantly elevated in the malathion-treated cell ($p < 0.0005$). Hprt mutations in malathion-treated cells arose preferentially at G:C basepairs, which is consistent with earlier reports that malathion alkylates guanine nucleotides. Assessing molecular changes at both genomic and cDNA levels in the same mutants revealed that many small,

partial exon deletions (< 20 bp) in genomic DNA were often represented in the cDNA at the loss of one or more exons. In addition, It was noted that identical genomic mutations can result in different cDNA products in different T-cell isolates. These observations affirm the importance of genomic sequence analysis in combination with RT/PCR for a more accurate definition of the mutation spectrum.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2010","Calaf, G. M., Balajee, A. S., Roy, D.","Molecular markers for breast carcinogenesis models induced by environmental substances and estrogen","","70(8)","326255f0-7b4d-4c4e-82b0-042763460e47","","Breast cancer is the most common cancer in women throughout the world. Exogenous and endogenous agents such as environmental carcinogens and female hormones seem to be involved in the etiology of breast cancer. It is a multistage process involving a series of genetic alterations, identification of potential genes responsible for breast carcinogenesis is critical for timely diagnosis and prevention of breast cancer. To gain insights into the mechanisms for breast cancer initiation and development processes by exogenous environmental agents, we have developed many experimental breast cancer model systems: In vitro model with the immortalized human breast epithelial cell line, MCF-10F exposed to (I) low doses of high LET (linear energy transfer) alpha particles (150 keV/Î¼m) (Carcinogenesis 21: 769, 2000) and b), (II) organophosphorous pesticides, either with Parathion (P) or Malathion (M) and (III) combination of either P or M in the presence of estrogen (E). Results showed that MCF-10F cells treated either with double dose of 60 cGy alpha particles in the presence of E or pesticides induced malignant transformation of MCF-10F. The malignant transformation was determined by multiple biological assays: increased cell proliferation, anchorage independency, invasive capabilities and tumor formation in nude mice, microsatellite instability and loss of heterozygosity in chromosomes 17, 11, 6, 8. Gene expression analysis using cancer pathway specific and affymetrix arrays detected alterations in the expression levels of p53, ErbB2, BRCA1, c-Ha-ras, Rho-A, PTEN, RB, c-Ha-ras, transforming protein Rho-A, F, GDP, TGF alpha, beta receptor, integrin B6, Notch3 and cathepsin. In addition to the in vitro human model, in vivo rat mammary gland model was also generated: (I) control (II) either P or M (III) E and (IV) P or M and E. Animals were treated for 5 days. These combined treatments induced significant progressive morphological and molecular changes. Alterations in the expression levels of RNA and protein were observed for c-fos, c-myc, mutant p53, ErbB2, BRCA1, c-Ha-ras, Rho-A, CYP1A1 gene and protein expression in the rat mammary gland after 240 days of treatment in comparison to control. Such stimulation led to mammary tumor formation. Collectively, our study shows the molecular signature of oncogenic deregulation in breast cancer progression induced by the combination of environmental substances and estrogen. Thus, aberrant expression of multiple genes involved in key signaling pathways renders these models as important tools for monitoring carcinogenic progression and chemo-intervention.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2013","Kachuri, L., Demers, P. A., Blair, A., Spinelli, J. J., Pahwa, M., McLaughlin, J. R., Pahwa, P., Dosman, J. A., Harris, S. A.","Multiple pesticide exposures and the risk of multiple myeloma in Canadian men","","133(8):1846-1858","7f6ddf3c-2944-4169-bd2b-ad6d088d3ea6","","Multiple myeloma (MM) has been linked to certain agricultural exposures, including pesticides. This analysis aimed to investigate the association between lifetime use of multiple pesticides and MM risk using two exposure metrics: number of pesticides used and days

per year of pesticide use. A frequency-matched, population-based case-control study was conducted among men in six Canadian provinces between 1991 and 1994. Data from 342 MM cases and 1,357 controls were analyzed using logistic regression to calculate odds ratios (OR) and 95% confidence intervals. Pesticides were grouped by type, chemical class and carcinogenic potential, using a composite carcinogenic probability score. Selected individual pesticides were also examined. Regression models were adjusted for age, province of residence, use of proxy respondents, smoking and selected medical history variables. The overall pattern of results was complex. Positive trends in risk were observed for fungicides (ptrend=0.04) and pesticides classified as probably carcinogenic or higher (p trend=0.03). Excess risks of MM were observed among men who reported using at least one carbamate pesticide (OR=1.94, 1.16-3.25), one phenoxy herbicide (OR=1.56, 1.09-2.25) and â‰¥3 organochlorines (OR=2.21, 1.05-4.66). Significantly higher odds of MM were seen for exposure to carbaryl (OR=2.71, 1.47-5.00) and captan (OR=2.96, 1.40-6.24). Use of mecoprop for >2 days per year was also significantly associated with MM (OR=2.15, 1.03-4.48). Focusing on multiple pesticide exposures is important because this more accurately reflects how exposures occur in occupational settings. Significant associations observed for certain chemical classes and individual pesticides suggest that these may be MM risk factors. What's new? This study is the first to investigate the risk of multiple myeloma from exposure to multiple pesticides using two distinct metrics: number of pesticides and days per year of pesticide use. Focusing on multiple pesticide exposures is important because it more accurately reflects how exposures occur in agricultural settings. Although the overall pattern was complex, increased risks observed for certain pesticide groups and individual compounds suggest that these may be risk factors for multiple myeloma. Copyright Â© 2013 UICC.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2008","Borre, M.","Nerve-sparing radical prostatectomy - Effect and risks","","170(34):2549-2554","b6906138-5830-4da6-9f29-ced137bf8dd0","","Introduction: The purpose of nerve-sparing technique performing radical prostatectomy (NSRP) is to attempt to preserve the neurovascular bundle which is located posterolaterally on both sides of the prostate. The nervesparing technique presupposes the pre- and per operative tumour stage as well as preoperative erectile function - so as not to unnecessarily risk compromising the radicalism of the surgery. Materials and methods: In the period 2003-2006 242 patients were radical prostatectomized (RP) at the Dept. of Urology, Aarhus University Hospital, Skejby. A total of 84 of these were offered NSRP. Data concerning erectile function preoperatively and 12 months postoperatively were compared. Likewise the postoperative tumour control following NSRP was investigated. Results: There was a statistically significant association between NSRP and preserved potency 12 months postoperatively compared to the non-NSRP patient group. Moreover, no association between risks of positive surgical margins in patients treated with or without NSRP technique was observed. During follow up (median 39 months) the rate of biochemical recurrence was 40. Among these 8, 13 and 20% of the patients were respectively treated with bilateral-, unilateral- and non-NSRP. Conclusion: NSRP seems to be both a safe and effective procedure in carefully selected patients. Furthermore, the results suggest that if preoperatively potent, low- to middle-risk group patients (cT1-2a/b, Gleason score < 7 and PSA < 10 ng/mL) are potential candidates for at least unilateral NSRP.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2012","Starks, S. E., Gerr, F., Kamel,

F., Lynch, C. F., Jones, M. P., Alavanja, M. C., Sandler, D. P., Hoppin, J. A.","Neurobehavioral function and organophosphate insecticide use among pesticide applicators in the Agricultural Health Study","Neurotoxicology and teratology","34(1):168-76","cbd55dd4-e35e-4e48-8add-88d265ae0991","","Although persistent decrements in cognitive function have been observed among persons who have recovered from clinically overt organophosphate (OP) pesticide poisoning, little is known about the cognitive effects of chronic OP exposures that do not result in acute poisoning. To examine associations between long-term pesticide use and neurobehavioral (NB) function, NB tests were administered to licensed pesticide applicators enrolled in the Agricultural Health Study (AHS) in Iowa and North Carolina. Between 2006 and 2008, 701 male participants completed nine NB tests to assess memory, motor speed and coordination, sustained attention, verbal learning and visual scanning and processing. Data on ever-use and lifetime days of use of 16 OP pesticides were obtained from AHS interviews conducted before testing between 1993 and 2007 and during the NB visit. The mean age of participants was 61 years (SD=12). Associations between pesticide use and NB test performance were estimated with linear regression controlling for age and outcome-specific covariates. NB test performance was associated with lifetime days of use of some pesticides. Ethoprop was significantly associated with reduced performance on a test of motor speed and visual scanning. Malathion was significantly associated with poor performance on a test of visual scanning and processing. Conversely, we observed significantly better test performance for five OP pesticides. Specifically, chlorpyrifos, coumaphos, parathion, phorate, and tetrachlorvinphos were associated with better verbal learning and memory; coumaphos was associated with better performance on a test of motor speed and visual scanning; and parathion was associated with better performance on a test of sustained attention. Several associations varied by state. Overall, we found no consistent evidence of an association between OP pesticide use and adverse NB test performance among this older sample of pesticide applicators. Potential reasons for these mostly null results include a true absence of effect as well as possible selective participation by healthier applicators.","","","RefMan","","","","","","","","","","Unknown","Unknown","Unknown","Unknown","","","2013","Lex, J.","New drugs and devices from 2011-2012 that might change your practice","","14(6):619-628","9a862078-4d44-48a8-ae9d-3be31d903030","","To be honest, I thought this would be a lost cause. Even after skipping a New Drugs and Devices essay in 2012, I figured that I would have to search long and hard to find 10 new things that emergency practitioners needed to know about. Although there were no true blockbuster medications for emergency physicians, I nonetheless found 10 medicines that we probably should know, along with a new device that may change the way we work up patients with palpitations, and a clever new delivery system for subcutaneous epinephrine.","","","RefMan","","","","","","","","","","Unknown","Unknown","Unknown","Unknown","","","2009","Mumcuoglu, K. Y., Gilead, L., Ingber, A.","New insights in pediculosis and scabies","","4(3):285-302","a87954e7-0ead-45bb-ad0f-7774d2626b72","","Despite the use of powerful insecticides and the prodigious efforts of parents and health providers, successful control of head louse infestations remains unattainable in most countries. The main reasons for ineffective control of head lice are sale of ineffective pediculicides, incorrect use of pediculicides, use of alternative remedies and methods for which efficacy has not been clinically proven, development of resistance to insecticides, improper attention to possible fomite

transmission, difficulty in diagnosing head lice infestations and embarrassment and social stigma that prevents reporting. Scabies is an intensely pruritic disorder induced by a delayed type hypersensitivity response (type IV immune reaction) to infestation of the skin by the mite Sarcoptes scabiei. This article reviews the biology of the mite, the clinical aspects and diagnosis of scabies infestations, as well as the treatment of choice with permethrin 5% dermal cream and the use of scabicides based on other chemical substances. Reports of scabies mites resistant to ivermectin and permethrin indicate that alternative treatment modalities should be sought and investigated. Â© 2009 Expert Reviews Ltd.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2014","YusÃ , V., CoscollÃ , C., Millet, M.","New screening approach for risk assessment of pesticides in ambient air","","96:322-330","df3b5a52-399a-41d0-9375-d5d2e1d8ed3b","","We present a novel screening approach for inhalation risk assessment of currently used pesticides (CUPs) in ambient air, based on the measurements of pesticide levels in the inhalable fraction of the particulate matter (PM10). Total concentrations in ambient air (gas+particle phases) were estimated using a theoretical model of distribution of semi-volatile organic compounds between the gas and the particulate phase based on the octanol-air partition (Koa) of each pesticide. The proposed approach was used in a pilot study conducted in a rural station in Valencia (Spain) from April through to October 2010. Twenty out of 82 analysed pesticides were detected in average concentrations ranging from 1.63 to 117.01pgm-3. For adults, children and infants the estimated chronic inhalation risk, expressed as Hazard Quotient (HQ) was <1 for all pesticides. Likewise, the cumulative exposure for detected organophosphorus, pyrethroids and carbamates pesticides, was estimated using as metrics the Hazard Index (HI), which was less than 1 for the three families of pesticides assessed. The cancer risk estimated for the detected pesticides classified as Likely or Possible carcinogens was less than 1.15E-7 for infants. In our opinion, the screening approach proposed could be used in the monitoring and risk assessment of pesticides in ambient air. Â© 2014 Elsevier Ltd.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2014","Schinasi, L., Leon, M. E.","Non-hodgkin lymphoma and occupational exposure to agricultural pesticide chemical groups and active ingredients: A systematic review and meta-analysis","","11(4):4449-4527","d33bccc2-7892-46c6-b932-e281e199a330","","This paper describes results from a systematic review and a series of meta-analyses of nearly three decades worth of epidemiologic research on the relationship between non-Hodgkin lymphoma (NHL) and occupational exposure to agricultural pesticide active ingredients and chemical groups. Estimates of associations of NHL with 21 pesticide chemical groups and 80 active ingredients were extracted from 44 papers, all of which reported results from analyses of studies conducted in high-income countries. Random effects meta-analyses showed that phenoxy herbicides, carbamate insecticides, organophosphorus insecticides and the active ingredient lindane, an organochlorine insecticide, were positively associated with NHL. In a handful of papers, associations between pesticides and NHL subtypes were reported; B cell lymphoma was positively associated with phenoxy herbicides and the organophosphorus herbicide glyphosate. Diffuse large B-cell lymphoma was positively associated with phenoxy herbicide exposure. Despite compelling evidence that NHL is associated with certain chemicals, this review indicates the need for investigations of a larger variety of pesticides in more geographic areas, especially in low- and middle-income countries, which, despite producing a large portion of the world's agriculture,

were missing in the literature that were reviewed. Â© 2014 by the authors; licensee MDPI, Basel, Switzerland.","","","RefMan","","","","","","","","","" "Unknown","Unknown","Unknown","Unknown","","","2014","Alavanja, M. C. R., Hofmann, J. N., Lynch, C. F., Hines, C. J., Barry, K. H., Barker, J., Buckman, D. W., Thomas, K., Sandler, D. P., Hoppin, J. A., Koutros, S., Andreotti, G., Lubin, J. H., Blair, A., Freeman, L. E. B.","Non-Hodgkin lymphoma risk and insecticide, fungicide and fumigant use in the agricultural health study","","9(10)","d55da3d1-a096-4125-95f4-f540780f1f07","","Farming and pesticide use have previously been linked to non-Hodgkin lymphoma (NHL), chronic lymphocytic leukemia (CLL) and multiple myeloma (MM). We evaluated agricultural use of specific insecticides, fungicides, and fumigants and risk of NHL and NHL-subtypes (including CLL and MM) in a U.S.-based prospective cohort of farmers and commercial pesticide applicators. A total of 523 cases occurred among 54,306 pesticide applicators from enrollment (1993-97) through December 31, 2011 in Iowa, and December 31, 2010 in North Carolina. Information on pesticide use, other agricultural exposures and other factors was obtained from questionnaires at enrollment and at follow-up approximately five years later (1999-2005). Information from questionnaires, monitoring, and the literature were used to create lifetime-days and intensity-weighted lifetime days of pesticide use, taking into account exposure-modifying factors. Poisson and polytomous models were used to calculate relative risks (RR) and 95% confidence intervals (CI) to evaluate associations between 26 pesticides and NHL and five NHL-subtypes, while adjusting for potential confounding factors. For total NHL, statistically significant positive exposure-response trends were seen with lindane and DDT. Terbufos was associated with total NHL in ever/never comparisons only. In subtype analyses, terbufos and DDT were associated with small cell lymphoma/chronic lymphocytic leukemia/marginal cell lymphoma, lindane and diazinon with follicular lymphoma, and permethrin with MM. However, tests of homogeneity did not show significant differences in exposure-response among NHL-subtypes for any pesticide. Because 26 pesticides were evaluated for their association with NHL and its subtypes, some chance finding could have occurred. Our results showed pesticides from different chemical and functional classes were associated with an excess risk of NHL and NHL subtypes, but not all members of any single class of pesticides were associated with an elevated risk of NHL or NHL subtypes. These findings are among the first to suggest links between DDT, lindane, permethrin, diazinon and terbufos with NHL subtypes.","","","RefMan","","","","","","","","","" "Unknown","Unknown","Unknown","Unknown","","","2001","McDuffie, H. H., Pahwa, P., McLaughlin, J. R., Spinelli, J. J., Fincham, S., Dosman, J. A., Robson, D., Skinnider, L. F., Choi, N. W.","Non-Hodgkin's lymphoma and specific pesticide exposures in men: cross-Canada study of pesticides and health","Cancer epidemiology, biomarkers & prevention : a publication of the American Association for Cancer Research, cosponsored by the American Society of Preventive Oncology","10(11):1155-63","52048fd0-e554-4898-b84b-ec15d202a774","","Our objective in the study was to investigate the putative associations of specific pesticides with non-Hodgkin's Lymphoma [NHL; International Classification of Diseases, version 9 (ICD-9) 200, 202]. We conducted a Canadian multicenter population-based incident, case (n = 517)-control (n = 1506) study among men in a diversity of occupations using an initial postal questionnaire followed by a telephone interview for those reporting pesticide exposure of 10 h/year or more, and a 15% random sample of the remainder. Adjusted odds ratios (ORs) were computed using conditional logistic regression stratified by the matching variables of age and

province of residence, and subsequently adjusted for statistically significant medical variables (history of measles, mumps, cancer, allergy desensitization treatment, and a positive history of cancer in first-degree relatives). We found that among major chemical classes of herbicides, the risk of NHL was statistically significantly increased by exposure to phenoxyherbicides [OR, 1.38; 95% confidence interval (CI), 1.06-1.81] and to dicamba (OR, 1.88; 95% CI, 1.32-2.68). Exposure to carbamate (OR, 1.92; 95% CI, 1.22-3.04) and to organophosphorus insecticides (OR, 1.73; 95% CI, 1.27-2.36), amide fungicides, and the fumigant carbon tetrachloride (OR, 2.42; 95% CI, 1.19-5.14) statistically significantly increased risk. Among individual compounds, in multivariate analyses, the risk of NHL was statistically significantly increased by exposure to the herbicides 2,4-dichlorophenoxyacetic acid (2,4-D; OR, 1.32; 95% CI, 1.01-1.73), mecoprop (OR, 2.33; 95% CI, 1.58-3.44), and dicamba (OR, 1.68; 95% CI, 1.00-2.81); to the insecticides malathion (OR, 1.83; 95% CI, 1.31-2.55), 1,1,1-trichloro-2,2-bis (4-chlorophenyl) ethane (DDT), carbaryl (OR, 2.11; 95% CI, 1.21-3.69), aldrin, and lindane; and to the fungicides captan and sulfur compounds. In additional multivariate models, which included exposure to other major chemical classes or individual pesticides, personal antecedent cancer, a history of cancer among first-degree relatives, and exposure to mixtures containing dicamba (OR, 1.96; 95% CI, 1.40-2.75) or to mecoprop (OR, 2.22; 95% CI, 1.49-3.29) and to aldrin (OR, 3.42; 95% CI, 1.18-9.95) were significant independent predictors of an increased risk for NHL, whereas a personal history of measles and of allergy desensitization treatments lowered the risk. We concluded that NHL was associated with specific pesticides after adjustment for other independent predictors.","","","RefMan","","","","","","","","","","" "Unknown","Unknown","Unknown","Unknown","","","2014","Pahwa, M., Beane Freeman, L., Spinelli, J. J., Blair, A., Pahwa, P., Dosman, J. A., McLaughlin, J. R., Demers, P. A., Zahm, S. H., Cantor, K. P., Weisenburger, D. D., Harris, S. A.","The North American Pooled Project (NAPP): Pooled analyses of case-control studies of pesticides and agricultural exposures, lymphohematopoietic cancers and sarcoma","","71:A116","fb46a4e7-71ff-4d02-b36e-ad304f0c6b41","","Objectives Previous studies have noted associations between specific pesticides and multiple cancer types. However, assessments for many pesticides have been limited by small numbers of exposed cases. To address this, we established the North American Pooled Project (NAPP), a collaborative effort to evaluate the relationship of pesticide and agricultural exposures to risks of lymphohematopoietic cancers and sarcoma. Method We harmonised previously collected data from three population-based case-control studies conducted in four American states with a similar Canada-wide study conducted in six provinces. Descriptive analyses of pesticide exposures, personal protective equipment (PPE) use, and demographic data were completed. The prevalence of self-reported pesticide use among cases and controls was determined for specific agents and chemical classes. Results The NAPP includes 5131 controls and 3274 cases (non-Hodgkin lymphoma [NHL] N=1690; Hodgkin lymphoma [HL] N=507; multiple myeloma [MM] N=587; soft tissue sarcoma N=490). Preliminary descriptive analyses indicate that approximately two-thirds of controls and NHL and MM cases ever lived or worked on a farm or ranch. Nearly half of controls and half of NHL, HL, and MM cases reported using any pesticide. Over 120 different insecticides, herbicides, and fungicides were reported. More than 17% of participants reported using the phenoxy herbicide 2,4-D and over 5% reported DDT, malathion, atrazine, or glyphosate. Around 6% of NHL cases and controls reported ever using PPE. Conclusions The large number of cases and controls and high frequency of

pesticide use in the NAPP will allow us to evaluate less commonly used pesticides, cancer sub-types, and smaller relative risks than previously possible.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2013","Krenn, L., Rita Bilia, A., Do CÃ©u Costa, M., Hook, I., Steinhoff, B., Wegener, T.","Now Ginkgo - 10 years after Cimicifuga?","","21(1):98-99","aaceb304-115e-442e-b428-27a989091253","","","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2015","Alkatout, I., Meinhold-Heerlein, I., von Leffern, I., Maass, N., Mettler, L.","Operative therapy of endometriosis: radical and gentle at the same time","","48(3):228-236","ec9b530e-d97d-40aa-9ea9-3c7fe3e3cbd4","","Background: Endometriosis is the second most common benign female genital disease after uterine leiomyoma. Objectives: This review discusses the individual management for each patient which should take into account the severity of the disease and whether the patient desires to have children. Endometriosis is defined as the presence of endometrial glands and stroma outside the internal epithelial lining of the cavity of the uterus. As a consequence, endometriosis can cause a wide range of symptoms, such as chronic pelvic pain, subfertility, dysmenorrhea, deep dyspareunia, cyclical bowel or bladder symptoms (e.g. dyschezia, bloating, constipation, rectal bleeding, diarrhea and hematuria), abnormal menstrual bleeding, chronic fatigue and low back pain. Results: Approximately 50 % of teenage women and up to 32 % of women of reproductive age operated on for chronic pelvic pain or dysmenorrhea, suffer from endometriosis. The time interval between the first unspecific symptoms and the medical diagnosis of endometriosis is approximately 7 years. This is caused not only by the non-specific nature of the symptoms but also by the frequent lack of awareness on the part of the cooperating disciplines with which the patients have first contact. As the pathogenesis of endometriosis is not clearly understood, a causal treatment is still not possible. Treatment options include watchful waiting, analgesia, hormonal medical therapy, surgical intervention and the combination of medical treatment before and/or after surgery. The treatment should be as radical as necessary and as minimal as possible. The recurrence rate among treated patients lies between 5 % and > 60 % and is very much dependent on the integrated management and surgical skills. Conclusion: To optimize the individual patient treatment a high degree of interdisciplinary cooperation in the diagnosis and treatment is crucial and should be reserved for appropriate centres especially in the case of deep infiltrating endometriosis.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2012","Gao, J., Liu, L., Liu, X., Lu, J., Hao, H., Yuan, H., Zhou, H.","The organic contamination survey and health risk assessment of 16 source water reservoirs in Haihe River basin","","65(6):998-1006","c305a27c-5fa9-4524-ba4a-b1a7d4cb544a","","Although contamination by organic pollutants has previously been reported to occur in the Haihe River basin, few studies have been carried out on the levels of source water reservoir contamination and the health risk in the Haihe River basin. To understand the organic pollution status of the reservoirs in the Haihe River basin, samples were collected from 16 source water reservoirs. The samples were analyzed for the representative organic pollutants, which included benzene homologues, chlorobenzene compounds, organophosphorus pesticides, and nitrobenzene compounds, a total in all of 17 compounds. It was observed that the concentrations of the 17 compounds in the 16 reservoirs were all less than the limit laid down by Chinese surface water quality standards. In addition, benzene, toluene,

nitrobenzene, p-nitrochlorobenzene, 2,4-dinitrotoluene and 2,4-dinitrochlorobenzene, dichlorvos, demeton, dimethoate methyl parathion, malathion and parathion were frequently detected in the 16 source water reservoirs, especially the organophosphorus pesticides; the detection rates of dichlorvos, dimethoate, methyl parathion, malathion and parathion were all 100% in the 16 source water reservoirs. The detection rate of target compounds suggested that organic pollution had been common in the source water of the Haihe River basin. The health risk assessment results suggested that the noncarcinogenic risk hazard quotient values of the target compounds were less than one, and the cancer risk values were all below 1 Ã- 10-6, which indicated that the heath risk produced by the target compounds in the 16 reservoirs was at an acceptable level. Â© IWA Publishing 2012.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2008","Borre, M., Iversen, P., Bendixen, A., Iversen, M. G., Kehlet, H.","Organisation and early outcome after radical prostatectomy in Denmark 2004-2007","","170(34):2545-2549","da0c32aa-0648-48e8-804a-ab6bd1d84170","","Background: The organisation, volume and early morbidity after radical prostatectomy has not been researched in Denmark. Materials and methods: The National Hospital Register was searched for all radical prostatectomies in Denmark from 2004 - 2007, including mortality and readmissions. Results: In total, 1469 radical prostatectomies were performed, initially in 9 departments, decreasing to 6 departments in 2007. From 2004 to 2007 the number of operations increased by approximately 60%. Median hospital stay was 4 days (mean 5.1 days) without any differences between departments. Mortality was 0.2%. Conclusion: There is an increasing rate of radical prostatectomies in Denmark. It is proposed that a national database be established to monitor early and long-term outcomes, including the role of surgical technique (nerve sparing, laparoscopic/robotic surgery, etc.) in order to ensure optimal organisation.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2012","Ajmal, K., Azmi, M. A., Zaidi, I. H., Naqvi, S. N. H., Perveen, R., Azmi, M. A.","Organophosphate and pyrethroid residues in the milk of women and breast cancer patients from Karachi","","23(2):63-66","2dc95bea-6675-4219-8765-8d30acbb5e06","","Aim: The aim of this study was to determine the presence of pesticide residues organophosphate and pyrethroid in the milk of women and in serum of breast cancer patients from different localities of Karachi due to pesticide exposure. Study Design: An experimental study. Place and Duration of Study: This is a research-based study that was conducted in the Department of Pharmacology, Institute of Pharmaceutical Sciences, Baqai Medical University, Karachi from March 2008 to March 2010. Materials and Methods: A total 40 milk samples were collected from private clinics and 6 serum samples from breast cancer patients were also collected from private cancer hospitals based at different areas of Karachi. All the samples were analyzed for the presence of pesticide residues. Samples of milk and serum were prepared accordingly and the purified samples were injected into the HPLC apparatus. The peaks of the samples were compared by the retention time of the standard peaks. The chromatogram obtained indicated the quantity of pesticide residues. Results: Milk samples and serum samples were analyzed using HPLC technique. Pesticides such as malathion, permethrin, deltamethrin and Polytrin-C were detected in different concentrations. The levels were significantly higher than the maximum residual limit. Conclusion: It is concluded that the presence of pesticides in the human body is a major concern in the development of various ailments because of possible immunotoxic, mutagenic and carcinogenic potential of

pesticides.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2015","Lerro, C. C., Koutros, S., Andreotti, G., Friesen, M. C., Alavanja, M. C., Blair, A., Hoppin, J. A., Sandler, D. P., Lubin, J. H., Ma, X., Zhang, Y., Beane Freeman, L. E.","Organophosphate insecticide use and cancer incidence among spouses of pesticide applicators in the Agricultural Health Study","Occupational and environmental medicine","72(10):736-44","67a8c274-bf49-4805-b2d8-8cf0b9761fd1","","OBJECTIVES: Organophosphates (OPs) are among the most commonly used insecticides. OPs have been linked to cancer risk in some epidemiological studies, which have been largely conducted in predominantly male populations. We evaluated personal use of specific OPs and cancer incidence among female spouses of pesticide applicators in the prospective Agricultural Health Study cohort. METHODS: At enrolment (1993-1997), spouses provided information about ever use of specific pesticides, including 10 OPs, demographic information, reproductive health history and other potential confounders. We used Poisson regression to estimate relative risks (RRs) and 95% CIs for all cancers diagnosed through 2010 for North Carolina and through 2011 for Iowa. RESULTS: Among 30,003 women, 25.9% reported OP use, and 718 OP-exposed women were diagnosed with cancer during the follow-up period. Any OP use was associated with an elevated risk of breast cancer (RR=1.20, 95% CI 1.01 to 1.43). Malathion, the most commonly reported OP, was associated with increased risk of thyroid cancer (RR=2.04, 95% CI 1.14 to 3.63) and decreased risk of non-Hodgkin lymphoma (RR=0.64, 95% CI 0.41 to 0.99). Diazinon use was associated with ovarian cancer (RR=1.87, 95% CI 1.02 to 3.43). CONCLUSIONS: We observed increased risk with OP use for several hormonally-related cancers, including breast, thyroid and ovary, suggesting potential for hormonally-mediated effects. This study represents the first comprehensive analysis of OP use and cancer risk among women, and thus demonstrates a need for further evaluation.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2009","Calaf, G. M., Echiburu-Chau, C., Roy, D.","Organophosphorous pesticides and estrogen induce transformation of breast cells affecting p53 and c-Ha-ras genes","","35(5):1061-1068","0b0e4e22-981f-4a55-97c7-dae03f120d33","","Cancer progression has been associated with an increase in genomic instability indicated by inactivation of tumor suppressor genes and activation of oncogenes. Epidemiological and experimental evidence has implicated estrogens in the etiology of breast cancer. To study environmental organophosphorous pesticides is of interest since evidence indicate that pesticides may enhance cell division, increasing the risk of breast cancer. The aim was to evaluate the effects of these pesticides, such as parathion and malathion in the presence of estrogen on malignant transformation as well as on genomic instability, that is in the frequency of loss of heterozygosity (LOH) and microsatellite instability (MSI). The MCF-10F immortalized human breast epithelial cell line, that was treated with parathion or malathion alone and in combination with estrogen was used. These studies indicated that either pesticide alone or in combination with estrogen induced malignant transformation as shown by anchorage-independent growth capability and invasive characteristics in comparison to control. Such malignant phenotypic characteristics were corroborated by significant ($P<0.05$) increase in p53 and c-Ha-ras protein expression. Results indicated different degrees of allelic imbalance in the form of LOH or MSI with different microsatellite markers. MSI was found in malathion and estrogen-treated cells with a marker used for p53 tumor suppressor gene at loci 17p13.1. The same combination of substances presented MSI with a marker used for c-Ha-ras mapped in chromosome 11p14.1, as well as mutations in c-Ha-

ras for codons 12 and 61. LOH was observed in codon 12 in the presence of estrogen or malathion alone. Parathion alone and combined with estrogen induced MSI in codon 61. It can be concluded that the organophosphorous pesticides parathion and malathion induced malignant transformation of breast cells through genomic instability altering p53 and c-Ha-ras, considered pivotal to cancer process.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2003","Cabello, G., Juarranz, A., Botella, L. M., Calaf, G. M.","Organophosphorous pesticides in breast cancer progression","Journal of submicroscopic cytology and pathology","35(1):1-9","a47079e0-cd6f-4118-8e97-735cf106cf1a","","Environmental substances may be involved in the etiology of breast cancers. Many studies have found an association between cancer in humans and exposure to agricultural pesticides. Organophosphorous pesticides have been used to control mosquito plagues. Parathion and malathion, organophosphorous pesticides are cholinesterase inhibitors responsible for the hydrolysis of body choline esters, including acetylcholine at cholinergic synapses. Their primary target of action in insects is the nervous system whereby they inhibit the enzyme acetylcholinesterase at synaptic junction. Atropine is a parasympatholytic alkaloid used as an antidote to acetylcholinesterase inhibitors. We have established an experimental breast cancer model, where epithelial cells in the rat mammary gland underwent a stepwise transformation into malignant cells by exposure to pesticides (Cabello et al, 2001). The aim of this work was to examine whether pesticides were able to induce progression of malignant transformation of a human breast epithelial cell line, MCF7. These results showed that parathion and malathion increased PCNA and induced mutant p53 protein expression of MCF7 cells in comparison to controls and atropine inhibited such action. These results indicated that organophosphorous pesticides can induce more changes in this malignant breast cell line, inducing another step in the progression of the transformation process and atropine on the other hand inhibited the effect of such substances.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2009","Kaya, C., Koca, O., KeleÅŸ, M. O., Yilmaz, G., Ã-ztÃ¼rk, M., KanberoÇ§lu, H., Karaman, M. I.","Our 6 year experience of radical cystectomy","","22(1):1-7","406c6a53-c2bc-4979-a636-a34e3ee51efe","","Objective: Bladder cancer is the second most common cancer of the urinary tract. Radical cystectomy and urinary diversion are the gold standard treatment for invasive bladder cancer. Patient and Methods: We carried out a retrospective evaluation of 71 patients who had undergone radical cystectomy between January 2002 and January 2008 on the basis of their demographic properties, preoperative and post-operative pathologies, method of urinary diversion and the complications that arose. Results: The mean follow-up was 28.8 months after the operation. The pathologic stage was superficial for 13 patients (18%), T2 for 20 patients (28%), T3 for 25 patients (35%) and T4 for 14 patients (19%). Squamous cell carcinoma was reported in 7 and lymph node metastasis in 24 patients. Postoperative short-term complications were: wound infection in 12, wound eventration in 6, ileus in 3 and a urinary leakage from ureteroileal anastomosis in 2 patients. Additionally, a loop stenosis in I patient and an allergic reaction due to urostomy material in 1 patient were noted. 2 patients died the day after the operation. Conclusion: Radical cystectomy is found to be an effective treatment with low complication rates corresponding to data in the literature.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2007","Possamai, F. P., Fortunato, J.

J., Feier, G., Agostinho, F. R., Quevedo, J., Wilhelm Filho, D., Dal-Pizzol, F.","Oxidative stress after acute and sub-chronic malathion intoxication in Wistar rats","","23(2):198-204","ddb1b842-281c-4cb9-adb9-d9cfe342a015","","Malathion is an insecticide of the group of organophosphate pesticides (OPs), which shows strong insecticidal effects. However, it possesses mutagenic and carcinogenic properties and shows organ-specific toxicity in relation to the heart, kidney and other vertebrate organs. The exact mechanism of the genotoxic effects of malathion is not yet known. Free radical damage is an important direct or indirect factor in several pathological and toxicological processes, including malathion poisoning. The aim of the present study was the evaluation of oxidative damage in different tissues of Wistar rats, administered intra peritoneally at doses of 25, 50, 100 and 150 mg malathion/kg, after acute and sub-chronic malathion exposure. Oxidative stress evaluation was based on lipid peroxidation by levels of thiobarbituric acid reactive substances (TBARS), protein oxidation by levels of carbonyl groups, and also on the activities of superoxide dismutase and catalase, two antioxidant enzymes that detoxity superoxide radical (O2{radical dot}-) and hydrogen peroxide, respectively. The results showed that the most sensitive targets of oxidative damage were kidney, lung and diaphragm after acute treatment, and liver, quadriceps and serum after sub-chronic treatment. Also, in general, increased lipid peroxidation measured as TBARS levels seems to be a better biomarker of oxidative stress compared to the contents of protein carbonyls after acute and sub-chronic malathion treatments. The present findings reinforce the concept that oxidative stress and particularly lipoperoxidation, are involved in OPs toxicity. Â© 2006 Elsevier B.V. All rights reserved.","","","RefMan","","","","","","","","","" "Unknown","Unknown","Unknown","Unknown","","","2015","Selmi, S., El-Fazaa, S., Gharbi, N.","Oxidative stress and alteration of biochemical markers in liver and kidney by malathion in rat pups","","31(9):783-788","6ba8b993-5453-457b-85e1-9ebf7e14a0ec","","The present study was undertaken to determine the effects of malathion exposure through maternal milk on oxidative stress, functional an metabolic parameters in kidney and liver of rat pups. We found that lactational exposure to malation (200 mg/kg, body weight (bw)) induced an oxidative stress status assessed by an increase in malondialdhyde (MDA) content, reflecting lipoperoxidation, a decrease in thiol groups content as well as depletion of enzyme activities as a superoxide dismutase (SOD) and catalase (CAT) on postnatal days (Pnds) 21 and 51. Moreover, the current study showed that malathion induced liver and kidney dysfunctions demonstrated by considerable increase in phosphatase alkaline (PAL), aspartate aminotransferase (AST) and alanine aminotransferase (ALT) activities as well as total and direct bilirubin, creatinine urea and acid uric contents. We also observed an increase in triglyceride (TG), total cholesterol (TC), low-density lipoprotein cholesterol (LDL-C) and a decrease in high-density lipoprotein cholesterol (HDL-C) in the plasma of treated rat pups. These findings evidenced that malathion exposure during lactation through maternal milk of rats pups induced kidney and liver oxidative stress as well as functional and metabolic disorders that play a role in the development of others pathologies as cardiovascular diseases and cancers.","","","RefMan","","","","","","","","","" "Unknown","Unknown","Unknown","Unknown","","","2012","Mostafalou, S., Eghbal, M. A., Abdollahi, M., Mohammadi, S.","Oxidative stress and inflammation in malathion disrupted hepatic glucose metabolism","","211:S132","ec791dfb-763a-4d4b-8b2c-e6b729d30d42","","Purpose: A lot of studies show that organophosphate pesticides exert

several effects on glucose homeostasis. The present study investigates the influence of subchronic exposure to malathion on hepatic gluconeogenesis in relation to acetyl cholinesterase inhibition, oxidative stress and inflammatory response in the rat. Methods:Malathion was administered by gavage at doses of 25, 50 and 100 mg/kg for 32 days. Results & Conclusion: Fasting hyperglycemia was seen in line with increased activity of hepatic phosphoenolpyruvate carboxykinase, glucose 6-phosphatase, and tumor necrosis factor alpha. In addition to the impaired glucose tolerance and inhibition of acetyl cholinesterase activity in a dose-dependent manner, there were significant increases in hepatic lipid peroxidation, carbonyl groups and 8-deoxyguanosine as the biomarkers of reactive oxygen species mediated damage to lipid, protein and DNA, respectively. The results suggest the possibility of malathion-induced insulin resistance in the liver through oxidative and inflammatory signaling pathways.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2006","Willens, S., Stoskopf, M. K., Baynes, R. E., Lewbart, G. A., Taylor, S. K., Kennedy-Stoskopf, S.","Percutaneous malathion absorption by anuran skin in flow-through diffusion cells","Environmental toxicology and pharmacology","22(3):255-62","94101f93-59d6-42e4-a5a0-66302e3d30ba","","There is increased concern about the sublethal effects of organophosphorous (OP) compounds on human and animal health, including the potential role of OP compounds in the global decline of amphibian populations. Malathion is one of the most widely used OP pesticides with numerous agricultural and therapeutic applications, and exposure to environmentally applied malathion can lead to adverse systemic effects in anurans. Cutaneous absorption is considered a potentially important route of environmental exposure to OP compounds for amphibians, especially in aquatic environments. One in vitro system commonly used to determine the absorption kinetics of xenobiotics across the skin is the two-compartment Teflon flow-through diffusion cell system. To establish cutaneous absorption kinetics of malathion, six full thickness skin samples taken from both the dorsal and ventral surfaces of each of three bullfrogs (Rana catesbeiana) and three marine toads (Bufo marinus) were placed into two-compartment Teflon flow-through diffusion cells perfused with modified amphibian Ringer's solution. A 26mug/cm(2) dose of malathion-2,3-(14)C diluted in 100% ethanol was applied to each sample (0.44-0.45muCi). Perfusate was collected at intervals over a 6h period and analyzed for (14)C in a scintillation counter. At the end of 6h, surface swabs, tape strips, biopsy punches of the dosed area of skin, and peripheral samples were oxidized and analyzed for residue effects. Malathion absorption was greater across the ventral skin compared to dorsal skin in both bullfrogs and marine toads.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2014","Beard, J. D., Umbach, D. M., Hoppin, J. A., Richards, M., Alavanja, M. C., Blair, A., Sandler, D. P., Kamel, F.","Pesticide exposure and depression among male private pesticide applicators in the agricultural health study","Environmental health perspectives","122(9):984-91","73a533fd-ca01-4b71-bafe-cd341267ebe1","","BACKGROUND: Pesticide exposure may be positively associated with depression. Few previous studies have considered the episodic nature of depression or examined individual pesticides. OBJECTIVE: We evaluated associations between pesticide exposure and depression among male private pesticide applicators in the Agricultural Health Study. METHODS: We analyzed data for 10 pesticide classes and 50 specific pesticides used by 21,208 applicators enrolled in 1993-1997 who completed a follow-up telephone interview in 2005-2010. We divided

applicators who reported a physician diagnosis of depression (n = 1,702; 8%) into those who reported a previous diagnosis of depression at enrollment but not follow-up (n = 474; 28%), at both enrollment and follow-up (n = 540; 32%), and at follow-up but not enrollment (n = 688; 40%) and used polytomous logistic regression to estimate odds ratios (ORs) and 95% CIs. We used inverse probability weighting to adjust for potential confounders and to account for the exclusion of 3,315 applicators with missing covariate data and 24,619 who did not complete the follow-up interview. RESULTS: After weighting for potential confounders, missing covariate data, and dropout, ever-use of two pesticide classes, fumigants and organochlorine insecticides, and seven individual pesticides-the fumigants aluminum phosphide and ethylene dibromide; the phenoxy herbicide (2,4,5-trichlorophenoxy)acetic acid (2,4,5-T); the organochlorine insecticide dieldrin; and the organophosphate insecticides diazinon, malathion, and parathion-were all positively associated with depression in each case group, with ORs between 1.1 and 1.9. CONCLUSIONS: Our study supports a positive association between pesticide exposure and depression, including associations with several specific pesticides.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2012","Roberts, J. R., Karr, C. J., Paulson, J. A., Brock-Utne, A. C., Brumberg, H. L., Campbell, C. C., Lanphear, B. P., Osterhoudt, K. C., Sandel, M. T., Trasande, L., Wright, R. O.","Pesticide exposure in children","","130(6):e1757-e1763","2a5638d4-be7e-4333-ba77-6ff09f7f0348","","This statement presents the position of the American Academy of Pediatrics on pesticides. Pesticides are a collective term for chemicals intended to kill unwanted insects, plants, molds, and rodents. Children encounter pesticides daily and have unique susceptibilities to their potential toxicity. Acute poisoning risks are clear, and understanding of chronic health implications from both acute and chronic exposure are emerging. Epidemiologic evidence demonstrates associations between early life exposure to pesticides and pediatric cancers, decreased cognitive function, and behavioral problems. Related animal toxicology studies provide supportive biological plausibility for these findings. Recognizing and reducing problematic exposures will require attention to current inadequacies in medical training, public health tracking, and regulatory action on pesticides. Ongoing research describing toxicologic vulnerabilities and exposure factors across the life span are needed to inform regulatory needs and appropriate interventions. Policies that promote integrated pest management, comprehensive pesticide labeling, and marketing practices that incorporate child health considerations will enhance safe use. Copyright Â© 2012 by the American Academy of Pediatrics.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2006","Bouvier, G., Blanchard, O., Momas, I., Seta, N.","Pesticide exposure of non-occupationally exposed subjects compared to some occupational exposure: a French pilot study","The Science of the total environment","366(1):74-91","f3f74980-95a5-461d-b453-5f669da0a27d","","Data about non-dietary exposure to different chemical classes of pesticides are scarce, especially in France. Our objective was to assess residential pesticide exposure of non-occupationally exposed adults, and to compare it with occupational exposure of subjects working indoors. Twenty unexposed persons, five gardeners, seven florists and nine veterinary workers living in Paris area were recruited. Nineteen residences, two greenhouses, three florist shops and three veterinary departments were then sampled. Thirty-eight insecticides, herbicides and fungicides were measured in indoor air with an air sampler for 24 h, and on hands by wiping them with isopropanol-wetted swabs.

After extraction, samples were analysed by gas and high-performance liquid chromatography. Seventeen different pesticides were detected at least once in indoor air and twenty-one on the hands. An average of 4.2+/-1.7 different pesticides was detected per indoor air sample. The organochlorines lindane, alpha-endosulfan and alpha-HCH were the most frequently detected compounds, in 97%, 69% and 38% of the samples, respectively. The organophosphates dichlorvos and fenthion, the carbamate propoxur and the herbicides atrazine and alachlor were detected in more than 20% of the air samples. Indoor air concentrations were often low, but could reach 200-300 ng/m(3) in residences for atrazine and propoxur. Propoxur levels significantly differed between the air of veterinary places and other places (Kruskal-Wallis test, $p<0.05$) and dieldrin levels between residences and workplaces ($p<0.05$). There was a greater number of pesticides on hands than in air, with an average of 6.3+/-3.3 different pesticides detected per sample, the most frequently detected being malathion, lindane and trifluralin, in more than 60% of the subjects. Maximal levels (up to 1000-3000 ng/hands) were observed either in the general population or in workers, depending on the pesticide. However, no significant difference was observed between workers and general population handwipe pesticide levels. As expected, gardeners were exposed to pesticides sprayed in greenhouses. Florists and veterinary workers, whose pesticide exposure had not been described until now, were also indirectly exposed to pesticides used for former pest control operations. Overall, general population was exposed to more various pesticides and at levels sometimes higher than in occupational places. The most frequent pesticides in residences were not the same as in US studies but levels were similar. These preliminary results need to be confirmed in a greater number of residences from different parts of the country, in order to better assess pesticide exposure of the general population and its influencing factors.","","","RefMan","","","","","","","","","","Unknown","Unknown","Unknown","Unknown","","","2003","Cabello, G., Galaz, S., Botella, L., Calaf, G., Pacheco, M., Stockert, J. C., Villanueva, A., Canete, M., Juarranz, A.","The pesticide malathion induces alterations in actin cytoskeleton and in cell adhesion of cultured breast carcinoma cells","International journal of oncology","23(3):697-704","65b6dc75-e4ae-40f5-86c9-23fad85859a7","","We have studied the effects of the organophosphorous pesticide malathion on cell viability, actin cytoskeleton, cell adhesion complex E-cadherin/beta-catenin, and Rho and Rac1 GTPases from the human mammary carcinoma cell line MCF-7. Malathion induced cell lethality, determined by the MTT assay, depending on the treatment conditions. Cells incubated with low concentrations of malathion, 16-32 microg/ml, showed high survival rates (>95%) at any evaluated time (1-5 days), whereas complete cell lethality was found using 512 microg/ml and 5 days of treatment. Deep morphological changes were induced with high doses of 64 and 128 microg/ml, and long incubation time (5 days); cells showed perinuclear vacuoles, rounding, shrinkage, and a gradual loss of adhesion. These changes were related to a decrease in the expression of the adhesion molecules, E-cadherin and beta-catenin, and to the distribution and reactivity of actin microfilaments to TRITC-phalloidin. Disruption of microfilaments, accompanied by the collapse of actin to perinuclear region, were characteristic of cells with loss of adhesion. At lower concentrations, some cells presented deformations on the plasma membrane as lamellipodia-like structures, which were particularly evident from 32 to 128 microg/ml. Conversely, we observed an increase in the expression of Rho and Rac1 GTPases, modulators of actin cytoskeleton and cell

adhesion.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2004","Olgun, S., Gogal, R. M., Jr., Adeshina, F., Choudhury, H., Misra, H. P.","Pesticide mixtures potentiate the toxicity in murine thymocytes","Toxicology","196(3):181-95","006472c9-838f-4f92-b513-bb33d5369d70","","The immunotoxic risks of multiple pesticide exposure were evaluated. C57BL/6 mouse thymocytes were exposed to lindane, malathion, and permethrin, either separately or in mixtures of two pesticides, in vitro. These pesticide exposures caused both apoptotic and necrotic cell death in thymocytes as evaluated by flow cytometric analysis in combination with 7-aminoactinomycin-D (7-AAD), Annexin-V/propidium iodide (PI) staining assays and lactate dehydrogenase release assays. When cells exposed to mixtures of two pesticides, a significantly greater than additive interaction was observed in both apoptotic and necrotic populations of cells. The gel electrophoresis of DNA of cells showed DNA ladder formation with limited genomic DNA and increased laddering in mixture exposures. Based on these findings, it is suggested that these pesticides are potent immunotoxicants, in vitro, and that the mechanism of cytotoxicity observed upon exposure to these pesticides may, at least in part, be due to induction of apoptosis. We also provided evidence that induction of drug metabolizing mixed function oxidase system with lindane may, in part, be responsible for the potentiation of cytotoxicity in the combined exposures. As more information is obtained on the potential immunotoxic effects of pesticides, further insights will be gained for the risk assessment of these environmental pollutants.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2015","Bedi, J. S., Gill, J. P., Aulakh, R. S., Kaur, P.","Pesticide Residues in Bovine Milk in Punjab, India: Spatial Variation and Risk Assessment to Human Health","Archives of environmental contamination and toxicology","69(2):230-40","ed800c6f-d711-4f01-983a-0a11ff23492a","","In the present study, gas chromatographic analysis of pesticide residues in bovine milk (n = 312) from Punjab, India, showed chlorpyrifos, DDT, and gamma-HCH as the predominant contaminants. In addition, the presence of beta-endosulfan, endosulfan suphate, cypermethrin, cyhalothrin, fenvalerate, deltamethrin, malathion, profenofos, and ethion was reported in milk samples. In this study, it was observed that 12 milk samples exceeded the maximum residue limits (MRLs) for gamma-HCH (lindane), 18 for DDT and chlorpyrifos, and 1 sample each for endosulfan, cypermethrin, and profenophos. In India, DDT is still permitted for a malaria control program, which may be the plausible reason for its occurrence in milk samples. The spatial variation for presence of pesticide residues in milk indicated greater levels in cotton-growing areas of Punjab. At current levels of pesticide residues in bovine milk, the human health risk assessment in terms of noncancer and cancer hazard was calculated based on both lower-bound [LB (mean residue levels)] and upper-bound [UP (95th percentile level)] limits. It was noticed that cancer and noncancer risk were within United States Environmental Protection Agency prescribed limits for both adults and children at the LB, but children were being exposed to greater risk for DDT and HCH at the 95th-percentile UB level.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2015","Andreotti, G., Hoppin, J. A., Hou, L., Koutros, S., Gadalla, S. M., Savage, S. A., Lubin, J., Blair, A., Hoxha, M., Baccarelli, A., Sandler, D., Alavanja, M., Beane Freeman, L. E.","Pesticide Use and Relative Leukocyte Telomere Length in the Agricultural Health Study","PloS one","10(7):e0133382","824eaf6e-41fd-4585-a6c9-c20ce33073de","","Some studies suggest

that telomere length (TL) may be influenced by environmental exposures, including pesticides. We examined associations between occupational pesticide use reported at three time points and relative telomere length (RTL) in the Agricultural Health Study (AHS), a prospective cohort study of pesticide applicators in Iowa and North Carolina. RTL was measured by qPCR using leukocyte DNA from 568 cancer-free male AHS participants aged 31-94 years with blood samples collected between 2006 and 2008. Self-reported information, including pesticide use, was collected at three time points: enrollment (1993-1997) and two follow-up questionnaires (1998-2003, 2005-2008). For each pesticide, we evaluated cumulative use (using data from all three questionnaires), and more recent use (using data from the last follow-up questionnaire). Multivariable linear regression was used to examine the associations between pesticide use (ever, lifetime days, intensity-weighted lifetime days (lifetime days*intensity score)) and RTL, adjusting for age at blood draw and use of other pesticides. Of the 57 pesticides evaluated with cumulative use, increasing lifetime days of 2,4-D (p-trend=0.001), diazinon (p-trend=0.002), and butylate (p-trend=0.01) were significantly associated with shorter RTL, while increasing lifetime days of alachlor was significantly associated with longer RTL (p-trend=0.03). Only the association with 2,4-D was significant after adjustment for multiple comparisons. Of the 40 pesticides evaluated for recent use, malathion was associated with shorter RTL (p=0.03), and alachlor with longer RTL (p=0.03). Our findings suggest that leukocyte TL may be impacted by cumulative use and recent use of certain pesticides.","","","RefMan","","","","","","","","","","","Unknown","Unknown","Unknown","Unknown","","","2012","Pahwa, M., Harris, S. A., Hohenadel, K., McLaughlin, J. R., Spinelli, J. J., Pahwa, P., Dosman, J. A., Blair, A.","Pesticide use, immunologic conditions, and risk of non-Hodgkin lymphoma in Canadian men in six provinces","","131(11):2650-2659","8049a174-e96b-41e8-bc27-48b1858d3f77","","Pesticide exposures and immune suppression have been independently associated with the risk of non-Hodgkin lymphoma (NHL), but their joint effect has not been well explored. Data from a case-control study of men from six Canadian provinces were used to evaluate the potential effect modification of asthma, allergies, or asthma and allergies and hay fever combined on NHL risk from use of: (i) any pesticide; (ii) any organochlorine insecticide; (iii) any organophosphate insecticide; (iv) any phenoxy herbicide; (v) selected individual pesticides [1,1'-(2,2,2-trichloroethylidene)bis[4-chlorobenzene]; 1,1,1-trichloro-2,2-bis(4-chlorophenyl) ethane (DDT), malathion, (4-chloro-2-methylphenoxy)acetic acid (MCPA), mecoprop, and (2,4- dichlorophenoxy)acetic acid (2,4-D); and (vi) from the number of potentially carcinogenic pesticides. Incident NHL cases (n = 513) diagnosed between 1991 and 1994 were recruited from provincial cancer registries and hospitalization records and compared to 1,506 controls. A stratified analysis was conducted to calculate odds ratios (ORs) adjusted for age, province, proxy respondent, and diesel oil exposure. Subjects with asthma, allergies, or hay fever had non-significantly elevated risks of NHL associated with use of MCPA (OR = 2.67, 95% confidence interval [CI]: 0.90-7.93) compared to subjects without any of these conditions (OR = 0.81, 95% CI: 0.39-1.70). Conversely, those with asthma, allergies, or hay fever who reported use of malathion had lower risks of NHL (OR = 1.25, 95% CI: 0.69-2.26) versus subjects with none of these conditions (OR = 2.44, 95% CI: 1.65-3.61). Similar effects were observed for asthma and allergies evaluated individually. Although there were some leads regarding effect modification by these immunologic conditions on the association between pesticide use and NHL, small numbers,

measurement error and possible recall bias limit interpretation of these results. Copyright Â© 2012 UICC.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2006","Guest, R. K., Ikehata, K., El-Din, M. G., Smith, D. W.","Pesticides and herbicides","","78(10):1755-1801","b767dcb0-19d2-4046-adac-e10f96799127","","","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2006","Tekin, A., ÅžengÃ¶r, F.","The place of radical cystectomy in treatment of bladder cancer in the elderly","","32(1):8-13","6303cc31-3e0b-4bb0-837b-2f1a6fb6bbc0","","Introduction: As the life expectancy increases, population is progressively becoming older. One of the natural results of this is the disproportionate increase in the incidence of bladder cancer seen in the elderly. Significant changes in physiology and comorbidity at older ages may make cancer treatment difficult. Standard treatment of nonmetastatic invasive bladder cancer is radical cystectomy. However, due to the belief that a major surgical intervention is not suitable in elderly patients they are managed by the alternative conservative methods and even only by palliative care. The results of the population-based prospective data collection studies verify the disparity of practice patterns between younger and older patients with bladder cancer and document that effective treatments are avoided in this age group. Yet, there is strong evidence showing that aggressive treatments may improve survival of these patients. Available literature data suggest that ineffective cancer treatment is the main reason for mortality rather than comorbidity. Many studies published recently demonstrate that radical cystectomy is a safe treatment in advanced aged patients. A general good health status and adequate cardiac and pulmonary functions are important for patient selection for cystectomy. However, more objective criteria are needed for appropriate risk categorization. Data of current epidemiological and clinical studies suggest that based on age alone radical cystectomy should not be avoided in patients with invasive bladder cancer.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","1997","Guha, A., Kumari, B., Bora, T. C., Roy, M. K.","Possible involvement of plasmids in degradation of malathion and chlorpyriphos by Micrococcus sp","Folia microbiologica","42(6):574-6","7d832b0f-09fa-4f4c-8f85-272af5406948","","Two plasmid-harboring strains of Micrococcus sp. (M-36 and AG-43) degrade malathion and chlorpyriphos. Derivatives of the strains (SDS-36 and AO-43) treated with acridine orange and sodium dodecyl sulfate could not utilize malathion and chlorpyriphos for growth as the sole carbon source. Agarose gel electrophoresis of cell extracts of M-36 and AG-43 revealed the presence of a plasmid which was absent in SDS-36 and AO-43--suggesting probable involvement of plasmids in the degradation of malathion and chlorpyriphos by M-36 and AG-43. Nalidixic acid resistance in M-36 was also lost upon elimination of plasmids.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2015","Trinder, M., Bisanz, J. E., Burton, J. P., Reid, G.","Probiotic lactobacilli: A potential prophylactic treatment for reducing pesticide absorption in humans and wildlife","","6(6):841-847","68b54091-6e00-4f19-afc4-4798ef95e6f3","","Numerous pesticides are used in agriculture, gardening, and wildlife-control. Despite their intended toxicity to pests, these compounds can also cause harm to wildlife and humans due to their ability to potentially bioaccumulate, leach into soils, and persist in the environment. Humans and animals are commonly exposed to these compounds through agricultural practices and consumption of contaminated foods and water. Pesticides can cause a range of adverse effects in humans ranging from minor irritation, to endocrine or nervous system

disruption, cancer, or even death. A convenient and cost-effective method to reduce unavoidable pesticide absorption in humans and wildlife could be the use of probiotic lactobacilli. Lactobacillus is a genus of Gram-positive gut commensal bacteria used in the production of functional foods, such as yoghurt, cheese, sauerkraut and pickles, as well as silage for animal feed. Preliminary in vitro experiments suggested that lactobacilli are able to degrade some pesticides. Probiotic Lactobacillus rhamnosus GR-1-supplemented yoghurt reduced the bioaccumulation of mercury and arsenic in pregnant women and children. A similar study is warranted to test if this approach can reduce pesticide absorption in vivo, given that the lactobacilli can also attenuate reactive oxygen production, enhance gastrointestinal barrier function, reduce inflammation, and modulate host xenobiotic metabolism.","","","RefMan","","","","","","","","","" "Unknown","Unknown","Unknown","Unknown","","","2009","Martin, M. T., Judson, R. S., Reif, D. M., Kavlock, R. J., Dix, D. J.","Profiling chemicals based on chronic toxicity results from the U.S. EPA ToxRef database","","117(3):392-399","00573410-36f9-4a56-9a87-c9703b6b6ac4","","Background: Thirty years of pesticide registration toxicity data have been historically stored as hardcopy and scanned documents by the U.S. Environmental Protection Agency (EPA). A significant portion of these data have now been processed into standardized and structured toxicity data within the EPA's Toxicity Reference Database (ToxRefDB), including chronic, cancer, developmental, and reproductive studies from laboratory animals. These data are now accessible and mineable, within ToxRefDB and are serving as a primary source of validation for U.S. EPA's ToxCast research program in predictive toxicology. Objectives: We profiled in vivo toxicities across 310 chemicals as a model application of ToxRefDB, meeting the need for detailed anchoring end points for development of ToxCast predictive signatures. Methods: Using query and structured data-mining approaches, we generated toxicity profiles from ToxRefDB based on long-term rodent bioassays. These chronic/cancer data were analyzed for suitability as anchoring end points based on incidence, target organ, severity, potency, and significance. Results: Under conditions of the bioassays, we observed pathologies for 273 of 310 chemicals, with greater preponderance, (> 90%) occurring in the liver, kidney, thyroid, lung; testis, and spleen. We observed proliferative lesions for 225 chemicals, and, 167 chemicals caused progression to cancer-related pathologies. Conclusions: Based on incidence, severity, and potency, we selected 26 primarily tissue-specific pathology end points to uniformly classify the 310 chemicals. The resulting toxicity profile classifications demonstrate the utility of structuring legacy toxicity information and facilitating the computation of these data within ToxRefDB for ToxCast and other applications.","","","RefMan","","","","","","","","","","" "Unknown","Unknown","Unknown","Unknown","","","2011","Band, P. R., Abanto, Z., Bert, J., Lang, B., Fang, R., Gallagher, R. P., Le, N. D.","Prostate cancer risk and exposure to pesticides in British Columbia Farmers","","71(2):168-183","7d1b7902-938c-49f4-af7c-208d2fd56303","","Background Several epidemiologic studies have reported an increased risk of prostate cancer among farmers. Our aim was to assess the risk of developing prostate cancer in relation to exposure to specific active compounds in pesticides. METHOD A case-control approach was used with 1,516 prostate cancer patients and 4,994 age-matched internal controls consisting of all other cancer sites excluding lung cancer and cancers of unknown primary site. Lifetime occupational history was obtained through a self-administered questionnaire and used in conjunction with a job exposure matrix to estimate the participants' lifetime cumulative exposure to approximately 180

active compounds in pesticides. Conditional logistic regression was used to assess prostate cancer risk, adjusting for potential confounding variables and effect modifiers. These include age, ethnicity, alcohol consumption, smoking, education, and proxy respondent. RESULTS AND CONCLUSIONS The significant association between prostate cancer risk and exposure to DDT (OR=1.68; 95% CI: 1.04-2.70 for high exposure), simazine (OR=1.89; 95% CI: 1.08-3.33 for high exposure), and lindane (OR=2.02; 95% CI: 1.15-3.55 for high exposure) is in keeping with those previously reported in the literature. We also observed a significant excess risk for several active ingredients that have not been previously reported in the literature such as dichlone, dinoseb amine, malathion, endosulfan, 2,4-D, 2,4-DB, and carbaryl. Some findings in our study were not consistent with those reported in the literature, including captan, dicamba, and diazinon. It is possible that these findings showed a real association and the inconsistencies reflected differences of characteristics between study populations. Â© 2010 Wiley-Liss, Inc.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2010","Ranjbar, A., Ghahremani, M. H., Sharifzadeh, M., Golestani, A., Ghazi-Khansari, M., Baeeri, M., Abdollahi, M.","Protection by pentoxifylline of malathion-induced toxic stress and mitochondrial damage in rat brain","Human & experimental toxicology","29(10):851-64","4288651c-3257-4068-958d-cf9a9ac48ba9","","OBJECTIVE: The objective of this study was to investigate the possible protective effects of pentoxifylline as a phosphodiesterase-5 inhibitor on malathion-induced oxidative damage to rat brain mitochondria. METHODS: Rats received malathion (200 mg/kg/day) and pentoxifylline (PTX, 50 mg/kg/day) in combination or alone. Alpha-tocopherol (AT, 15 mg/kg/day) was used as a positive standard. After 1 week of treatment, blood, whole brain tissue, and brain mitochondria were isolated. The activity of enzymatic scavengers such as glutathione peroxidase (GPx), catalase (CAT), copper-zinc superoxide dismutase (Cu/ZnSOD), and manganese superoxide dismutase (MnSOD) were measured. The extents of cellular lipid peroxidation (LPO), nitrotyrosine (NOx), and the ratio of reduced versus oxidized glutathione (GSH/GSSG) were determined. The protein expression of MnSOD was determined in brain mitochondria. RESULTS: Malathion stimulated activities of CAT, Cu/ZnSOD, GPx, and increased LPO and NOx, and decreased GSH/GSSG in whole brain homogenate. The changes in CAT, LPO, GPx, and GSH/GSSG were restored by PTX and AT. In plasma samples, malathion increased CAT, Cu/ZnSOD, and GPx activities, increased LPO, and decreased GSH/GSSG, while PTX and AT attenuated malathion-induced changes in GPx, Cu/ZnSOD, LPO, and GSH/GSSG. In brain mitochondria, malathion enhanced LPO, NOx, CAT, GPx, and MnSOD and decreased GSH/GSSG as compared to controls, whereas PTX and AT restored malathion-induced changes in GSH/GSSG, NOx, GPx, and CAT. Malathion noticeably enhanced expression of MnSOD protein as compared to controls. Malathion decreased viability of mitochondria that was recovered by AT. It is concluded that oxidative damage is at least in part the mechanism of toxicity of malathion in the mitochondria that can be recovered by PTX comparable to AT.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2016","Gopal, G., Hadoura, E., Mahmood, T.","Pruritus vulvae","","26(4):95-100","83233817-e648-49f9-80ad-bd30a641c8b6","","Community-based surveys indicate that 1 in 5 women presenting to their GP with vulval symptoms have pruritus vulva. Pruritus vulva is the predominant symptom for 1:10 women in their lifetime. Most women associate pruritus with infection, but in the majority of cases there is a non-infective cause. The condition affects quality of life; socially, psychologically and sexually. Multiple visits to health

professionals including the General Practitioners, Gynaecology, Dermatology and GUM clinics are commonly required. This article gives an update of classification of vulval pruritus and its management.","","","RefMan","","","","","","","","","" "Unknown","Unknown","Unknown","Unknown","","","2013","Soydan, H., MalkoÃ§, E., Dursun, F., OkÃ§elik, S., AteÅŸ, F., Adayener, C., Baykal, K. V.","Radical prostatectomy and active surveillance in prostate cancer; The evaluation of erectile function and depression","","4(3):189-192","f8bca979-5d91-49eb-ad94-b893fbc408de","","Aim: The aim of this study is to investigate whether active surveillance or radical prostatectomy in patients with localized prostate cancer has effect on erectile function and depression scores. Material and Method: Between years 2007 and 2010, patients diagnosed with localized prostate cancer after tests and received an active surveillance protocol and patients who underwent radical prostatectomy with similar preoperative clinical and pathological features were compared. Age, PSA, clinical stage, number of positive cores, Gleason score, time interval between diagnosis and the assessment of the patients in both groups were recorded. Beck depression scale and IIEF were filled by face to face interviews with patients. Results: There were 18 patients in active surveillance group, 17 patients in the radical prostatectomy group and mean follow-up periods were 16.8 (3-41), 59.35 (51-71) years, respectively. While age, PSA levels and Gleason scores were similar, the number of positive cores and clinical stages were different from each other. IIEF scores of patients in the active surveillance group were between 1-30, IIEF scores in the radical prostatectomy group were between 1-28, and the difference between the two groups was not statistically significant (p = 0.203). Beck Depression Scale scores ranged from 0-24 in the active surveillance group, and 0-16 in the radical prostatectomy group and the Beck Depression Scale scores were similar between groups (p = 0.157).Discussion: There is no difference between radical prostatectomy and active surveillance in terms of erectile function. Because of the lack of difference in terms of symptomatology of depression suggests that active surveillance does not load an additional psychological stress to patients.","","","RefMan","","","","","","","","","" "Unknown","Unknown","Unknown","Unknown","","","2014","Adami, H. O., Bill-Axelson, A., Holmberg, L., Johansson, J. E.","[Radical prostatectomy evaluated. 18 year follow up of Swedish randomized multicenter study]","","111(15):682-683","1f07dc3c-6668-46cf-ad1a-9810f77c443d","","","","","RefMan","","","","","","","","","" "Unknown","Unknown","Unknown","Unknown","","","2011","Tinay, I., Ã-zgen, M. B., Åžekerci, Ã‡ A., TÃ¼rkeri, L.","Radical retropubic prostatectomy - a review of the current literature and a study of 250 cases at Marmara University","","24(1):10-14","75054a1c-2177-445c-b6e6-e388ced7ed65","","Objective: To review the current literature of open radical retropubic prostatectomy and report the results of the last 250 open radical retropubic prostatectomies performed in our University clinic. Patients and Methods: A literature review was performed using the PubMed database with combinations of the following keywords radical prostatectomy, open retropubic, prostate cancer, complications and comorbidity. Charts of the most recent 250 consecutive patients who had undergone radical retropubic prostatectomy at the Urology Department of Marmara University School of Medicine were reviewed. Results: In 69.2% of the cases the tumor was confined within the prostate gland, whereas 30.8% of the cases had tumors with either positive surgical margins, capsular penetration, invasion of seminal vesicles or a combination of these features. Nerve-sparing radical retropubic prostatectomy patients were found to be more successful in achieving continence and

erectile function in the postoperative period. Cancer progressions were experienced in 12.4% of the cases following radical retropubic prostatectomy at a mean follow-up of 53.8 months with a mean time to progression of 20.7 months. Conclusion: The three goals of radical prostatectomy; cancer control, preservation of urinary control and preservation of sexual function were achieved with the long-time experience of open radical prostatectomy.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2009","Weibach, L., Schaefer, C.","Radical revision: Defensive strategies in the management of clinically localised prostate cancer","","15(10):1021-1024","af47eacc-c04c-46f4-a76e-fd58ec447b6e","","Prostate-specific antigen screening leads to the detection of prostate cancers that never would have become symptomatic and thereby also leads to potential overtreatment. The concept of active surveillance (AS) addresses this situation by deferring radical treatment of clinically localised prostate cancer as long as no relevant progression is diagnosed. The available evidence suggests that AS is a generally safe treatment option for low-risk prostate cancer. In practice, however, it still does not seem to be accepted for economic and historical reasons. Because radical treatment may highly affect the patient's quality of life, AS should become a more common option in the management of low-risk prostate cancer. Â© 2009 Springer Medizin Verlag.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2013","Blecharz, P., Reinfuss, M., RyÃ¥, J., Jakubowicz, J., Skotnicki, P., Wysocki, W.","Radiotherapy for carcinoma of the vagina: Immunocytochemical and cytofluorometric analysis of prognostic factors","","189(5):394-400","96f89a2a-cf7e-49a7-9450-6cae78806947","","Background and purpose: The aim of this study was to assess the potential prognostic factors in patients with primary invasive vaginal carcinoma (PIVC) treated with radical irradiation. Patients and methods: The analysis was performed on 77 patients with PIVC treated between 1985 and 2005 in the Maria SkÅ‚odowska-Curie Memorial Institute of Oncology, Cancer Center in Krakow. A total of 36 patients (46.8 %) survived 5 years with no evidence of disease (NED). The following groups of factors were assessed for potential prognostic value: population-based (age), clinical (Karnofsky Performance Score [KPS], hemoglobin level, primary location of the vaginal lesion, macroscopic type, length of the involved vaginal wall, FIGO stage), microscopic (microscopic type, grade, mitotic index, presence of atypical mitoses, lymphatic vessels invasion, lymphocytes/plasmocytes infiltration, focal necrosis, VAIN-3), immunohistochemical (protein p53 expression, MIB-1 index), cytofluorometric (ploidity, index DI, S-phase fraction, proliferation index SG2M) factors. Results: Significantly better 5-year NED was observed in patients: < 60 years, KPS â‰¥ 80, FIGO stage I and II, grade G1-2, MIB-1 index < 70, S-phase fraction < 10, and proliferation index < 25. Independent factors for better prognosis in the multivariate Cox analysis were age < 60 years, FIGO stage I or II, and MIB-1 index < 70. Conclusion: Independent prognostic factors in the radically irradiated PIVC patients were as follows: age, FIGO stage, MIB-1 index. Â© 2013 Urban & Vogel. Zusammenfassung: Hintergrund und Ziel: Das Ziel dieser Studie war die Auswertung potentieller prognostischer Faktoren bei Patientinnen mit einem primÃ¤ren invasiven Vaginalkarzinom (PIVC), die mit radikaler Bestrahlung therapiert wurden. Patienten und Methoden: Die Analyse wurde an 77 Patientinnen mit PIVC durchgefÃ¼hrt, die in den Jahren 1985 bis 2005 im Maria-SkÅ‚odowska-Curie-Gedenkinstitut fÃ¼r Onkologie, im Krebszentrum in Krakau, behandelt wurden. Insgesamt 36 Patientinnen (46,8 %) Ã¼berlebten 5 Jahre ohne Anzeichen einer Erkrankung (NED). Die

folgenden Faktorengruppen wurden auf ihren potenziellen prognostischen Wert ausgewertet: bevÃ¶lkerungsbezogen (Alter), klinisch (Karnofsky-Index [KPS], HÃ¤moglobinwert, primÃ¤re Lage der VaginallÃ¤sion, makroskopischer Typ, LÃ¤nge der betroffenen Vaginalwand, FIGO-Stadium), mikroskopisch (mikroskopischer Typ, Stufe, Mitoseindex, Vorhandensein von atypischen Mitosen, lymphatische GefÃ¤ÃŸinvasion, Lymphozyten-/Plasmazelleninfiltration, fokale Nekrose, VAIN-3), immunohistochemisch (Protein p53-Expression, MIB-1-Index) und zytofluorometrisch (Ploidiegrad, Index DI, S-Phase-Fraktion, Proliferationsindex SG2M). Ergebnisse: Deutlich bessere 5 Jahres-NED-Effekte wurden bei folgenden Patientinnen beobachtet: < 60 Jahre, KPS â‰¥ 80, FIGO-Stadium I und II, Grad G1-2, MIB-1-Index < 70, S-Phase-Fraktion < 10, Proliferationsindex < 25. UnabhÃ¤ngige Faktoren fÃ¼r eine bessere Prognose in der multivariaten Cox-Analyse waren Alter < 60 Jahre, FIGO-Stadium I oder II und MIB-1-Index < 70. Schlussfolgerung: UnabhÃ¤ngige Faktoren bei radikal bestrahlten Patientinnen mit einem primÃ¤ren invasiven Vaginalkarzinom waren wie folgt: Alter, FIGO-Stadium, MIB-1-Index. Â© 2013 Urban & Vogel.","","","RefMan","","","","","","","","","","

"Unknown","Unknown","Unknown","Unknown","","","2008","Echiburu-Chau, C., Calaf, G. M.","Rat lung cancer induced by malathion and estrogen","International journal of oncology","33(3):603-11","b5e21120-563d-4b4e-a01e-bcf3adf7b50c","","Lung cancer can originate from exposure to exogenous and endogenous environmental carcinogens. The use of organophosphorus insecticides has significantly increased in agricultural environments and in urban settings. There is evidence that estrogen can increase lung cancer risk in women. The aim of the present study was to analyze morphological and molecular alterations induced by malathion (M) and 17beta-estradiol (E2) in rat lung tissues. There were four groups: saline solution (control) (100 microg/100 g body weight; BW), M (22 mg/100 g BW), E2 (30 microg/100 gr BW) and combination of both. The animals were injected over a 5-day period and sacrificed 240 days after treatments and lung tissues were excised and analyzed for morphological alterations. Morphometric analysis indicated that M plus E2-treated animals showed a significantly (P<0.05) higher incidence of parenchyma with alveolar proliferative lesions (PAPL), preneoplastic lesions in bronchiolar epithelium (hyperplasia, metaplasia, carcinoma in situ and invasive carcinoma) and atypical lymphatic morphology (lymphatic cell aggregates; LCA) than M or E2 alone-treated and control animals after 240 days. Molecular biology studies indicated that c-ErbB2 and Rho-A had higher protein expression in M plus E2-treated animals in comparison to control and either M- or E-treated animals. In summary, the combination of M and E2 sharply induced pathological lesions in lung alveolar parenchyma, bronchiolar epithelia and lymphatic tissues, in comparison to control animals or in animals treated with either substance alone. These results indicated an increase in risk of rodent lung tumor formation by environmental and endogenous substances.","","","RefMan","","","","","","","","","","

"Unknown","Unknown","Unknown","Unknown","","","2001","Cabello, G., Valenzuela, M., Vilaxa, A., Duran, V., Rudolph, I., Hrepic, N., Calaf, G.","A rat mammary tumor model induced by the organophosphorous pesticides parathion and malathion, possibly through acetylcholinesterase inhibition","Environmental health perspectives","109(5):471-9","6cec35ba-bbec-44b8-8270-5664d687c623","","Environmental chemicals may be involved in the etiology of breast cancers. Many studies have addressed the association between cancer in humans and agricultural pesticide exposure. Organophosphorous pesticides have been used extensively to control mosquito plagues. Parathion and malathion are

organophosphorous pesticides extensively used to control a wide range of sucking and chewing pests of field crops, fruits, and vegetables. They have many structural similarities with naturally occurring compounds, and their primary target of action in insects is the nervous system; they inhibit the release of the enzyme acetylcholinesterase at the synaptic junction. Eserine, parathion, and malathion are cholinesterase inhibitors responsible for the hydrolysis of body choline esters, including acetylcholine at cholinergic synapses. Atropine, a parasympatholytic alkaloid, is used as an antidote to acetylcholinesterase inhibitors. The aim of this study was to examine whether pesticides were able to induce malignant transformation of the rat mammary gland and to determine whether alterations induced by these substances increase the cholinergic activation influencing such transformation. These results showed that eserine, parathion, and malathion increased cell proliferation of terminal end buds of the 44-day-old mammary gland of rats, followed by formation of 8.6, 14.3, and 24.3% of mammary carcinomas, respectively, after about 28 months. At the same time, acetylcholinesterase activity decreased in the serum of these animals from 9.78 +/- 0.78 U/mL in the control animals to 3.05 +/- 0.06 U/mL; 2.57 +/- 0.15 U/mL; and 3.88 +/- 0.44 U/mL in the eserine-, parathion-, and malathion-treated groups, respectively. However, atropine alone induced a significant ($p < 0.05$) decrease in the acetylcholinesterase activity from the control value of 9.78 +/- 0.78 to 4.38 +/- 0.10 for atropine alone, to 1.32 +/- 0.06 for atropine in combination with eserine, and 2.39 +/- 0.29 for atropine with malathion, and there was no mammary tumor formation. These results indicate that organophosphorous pesticides induce changes in the epithelium of mammary gland influencing the process of carcinogenesis, and such alterations occur at the level of nervous system by increasing the cholinergic stimulation.","","","RefMan","","","","","","","","","","","Unknown","Unknown","Unknown","Unknown","","","2010","Vargas, R. I., Shelly, T. E., Leblanc, L., Pinero, J. C.","Recent advances in methyl eugenol and cue-lure technologies for fruit fly detection, monitoring, and control in Hawaii","Vitamins and hormones","83:575-95","a16ad542-c779-4bf1-ae1d-91eeeac33344","","Worldwide, an important aspect of invasive insect pest management is more effective, safer detection and control systems. Phenyl propanoids are attractive to numerous species of Dacinae fruit flies. Methyl eugenol (ME) (4-allyl-1, 2-dimethoxybenzene-carboxylate), cue-lure (C-L) (4-(p-acetoxyphenyl)-2-butanone), and raspberry ketone (RK) (4-(p-hydroxyphenyl)-2-butanone) are powerful male-specific lures. Most evidence suggests a role of ME and C-L/RK in pheromone synthesis and mate attraction. ME and C-L/RK are used in current fruit fly programs for detection, monitoring, and control. During the Hawaii Area-Wide Pest Management Program in the interest of worker safety and convenience, liquid C-L/ME and insecticide (i.e., naled and malathion) mixtures were replaced with solid lures and insecticides. Similarly, Male Annihilation Technique (MAT) with a sprayable Specialized Pheromone and Lure Application Technology (SPLAT), in combination with ME (against Bactrocera dorsalis, oriental fruit fly) or C-L/RK (against B. cucurbitae, melon fly), and the reduced-risk insecticide, spinosad, was developed for area-wide suppression of fruit flies. The nontarget effects of ME and C-L/RK to native invertebrates were examined. Although weak attractiveness was recorded to flower-visiting insects, including bees and syrphid flies, by ME, effects to native Drosophila and other Hawaiian endemics were found to be minimal. These results suggested that the majority of previously published records, including those of endemic Drosophilidae, were actually for attraction to dead flies inside fruit fly traps. Endemic insect attraction

was not an issue with C-L/RK, because B. cucurbitae were rarely found in endemic environments.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2004","Panda, S., Sahu, S. K.","Recovery of acetylcholine esterase activity of Drawida willsi (Oligochaeta) following application of three pesticides to soil","Chemosphere","55(2):283-90","aff5544e-6e24-42ed-a032-c8c79dac17ae","","The recovery of acetylcholine esterase (AChE) activity of a dominant crop field earthworm (Drawida willsi, Michaelsen) was investigated under laboratory conditions following the application of two recommended agricultural (single and double) doses of butachlor (1.1 and 2.2 mga.i.kg(-1) dry soil), malathion (2.2 and 4.4 mga.i.kg(-1) dry soil) and carbofuran (1.1 and 2.2 mga.i.kg(-1) dry soil) to the soil. A sharp decline in the AChE activity of D. willsi was observed up to 9 and 12 days following treatment of carbofuran and malathion in both single and double doses, respectively, whereas very little inhibition was noticed in case of butachlor. D. willsi worms took 45 and 75 days to resume normal AChE activity after exposure to both single and double doses of malathion and carbofuran, respectively. Earlier [Soil Biol. Biochem. 31 (1999) 363-366], [Ph.D. thesis, Sambalpur University, Orissa, India, 2003] and [Pedobiologia (spl. issue), in press] reported that D. willsi takes 75-90 days and 90-105 days to resume normal growth and reproduction following application of both single and double agricultural doses of malathion and carbofuran, respectively. On the basis of the present and previous studies, we strongly suggest that the time gap between the first and second application of malathion, irrespective of single and double dosage, should be at least 90 days, whereas it should be at least 105 days for carbofuran. Butachlor was found to be very toxic, suppressing growth, sexual maturation and cocoon production of D. willsi at both single and double doses [Ph.D. thesis, Sambalpur University, Orissa, India, 2003]. We therefore suggest that application of organochlorine pesticides like butachlor should be avoided as far as possible to ensure maintenance of good soil health.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2012","Yildirim, M., GÃ¶ktaÅŸ, C., Horuz, R., Ã‡etinel, C. A., CangÃ¼ven, O., KÃ¼Ã§Ã¼k, H. F., Albayrak, S.","Rectal injury during radical prostatectomy","","18(3):250-254","9bfeb25f-9e05-4cfb-a1e2-7998998eead7","","Background We evaluated the data of our patients who experienced rectal injury during radical prostatectomy (RP). Methods We analyzed the data for the 7 patients (6 perineal, 1 retropubic) with iatrogenic rectal injury who were selected from 451 patients with RP (218 retropubic, 233 perineal) operated in our clinic between 2003 and 2011. Results The mean age of the 7 patients was 64.4 years. Rectal injury occurred during prostatic apical dissection in 4 patients, during dissection of Denonvilliers fascia in 1 patient, during transection of the rectourethral muscles in 1 patient, and during dissection of the rectal region proximal to the anal sphincter in 1 patient. The mean size of the lesions was 2 (1-4) cm. All of the rectal injuries were recognized during the operation, and double-layered sutures were used for the primary repair. None of the cases required colostomy procedure. No postoperative complications were encountered in 6 of the patients; however, 1 patient underwent a second operation on the following day due to detachment at the injury site. None of the patients displayed urethrorectal fistula, urinary ncontinence or urethral stricture. Conclusion Primary repair with double-layered suturing is sufficient for the treatment of rectal injuries that occur during RP if they are recognized intraoperatively.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2013","Alavanja, M. C. R., Ross, M. K.,

Bonner, M. R.","Reply to Increased cancer burden among pesticide applicators and others due to pesticide exposure","","63(5):366-367","b753044b-f11f-4401-924f-b07dcc6e542c","","","","","RefMan","","","","","","","","","","Unknown","Unknown","Unknown","Unknown","","","2000","Akbarsha, M. A., Latha, P. N., Murugaian, P.","Retention of cytoplasmic droplet by rat cauda epididymal spermatozoa after treatment with cytotoxic and xenobiotic agents","Journal of reproduction and fertility","120(2):385-90","624b9e28-ad5b-4aa8-bd49-af647e642381","","Spermatozoa leaving the testis contain a cytoplasmic droplet which they release during transit through the epididymis before reaching the cauda epididymidis. The cytoplasmic droplet shows P450 aromatase activity, which plays a role in synthesis of oestrogen from androgen. In the present study, 3-month-old Wistar strain male albino rats were administered with the organophosphate insecticides malathion or dichlorvos, or the phytotherapeutics andrographolide or ursolic acid. Segments of the epididymis were subjected to histopathological and ultrastructural analyses and it was found that 60-95% of the spermatozoa residing in the lumen of the cauda epididymidis retained the cytoplasmic droplet. The motility of the spermatozoa released from the cauda epididymidis was inhibited. One of the mechanisms of action of these toxicants on male reproductive function may be attributed to the retention of the cytoplasmic droplet and the resultant impairment of sperm motility.","","","RefMan","","","","","","","","","","Unknown","Unknown","Unknown","Unknown","","","2012","Banks, C. N., Lein, P. J.","A review of experimental evidence linking neurotoxic organophosphorus compounds and inflammation","","33(3):575-584","379d762f-8d06-4220-95bb-452646b6e923","","Organophosphorus (OP) nerve agents and pesticides inhibit acetylcholinesterase (AChE), and this is thought to be a primary mechanism mediating the neurotoxicity of these compounds. However, a number of observations suggest that mechanisms other than or in addition to AChE inhibition contribute to OP neurotoxicity. There is significant experimental evidence that acute OP intoxication elicits a robust inflammatory response, and emerging evidence suggests that chronic repeated low-level OP exposure also upregulates inflammatory mediators. A critical question that is just beginning to be addressed experimentally is the pathophysiologic relevance of inflammation in either acute or chronic OP intoxication. The goal of this article is to provide a brief review of the current status of our knowledge linking inflammation to OP intoxication, and to discuss the implications of these findings in the context of therapeutic and diagnostic approaches to OP neurotoxicity. Â© 2012 .","","","RefMan","","","","","","","","","","Unknown","Unknown","Unknown","Unknown","","","2014","Lasram, M. M., Dhouib, I. B., Annabi, A., El Fazaa, S., Gharbi, N.","A review on the molecular mechanisms involved in insulin resistance induced by organophosphorus pesticides","","322:1-13","a5c1f0c3-8767-4bfe-880b-6fa2dbee3633","","There is increasing evidence reporting that organophosphorus pesticides (OPs) impair glucose homeostasis and cause insulin resistance and type 2 diabetes. Insulin resistance is a complex metabolic disorder that defies explanation by a single etiological pathway. Formation of advanced glycation end products, accumulation of lipid metabolites, activation of inflammatory pathways and oxidative stress have all been implicated in the pathogenesis of insulin resistance. Ultimately, these molecular processes activate a series of stress pathways involving a family of serine kinases, which in turn have a negative effect on insulin signaling. Experimental and clinical data suggest an association between these molecular mechanisms and OPs compounds. It was first reported that OPs induce hyperglycemia. Then

a concomitant increase of blood glucose and insulin was pointed out. For some years only, we have begun to understand that OPs promote insulin resistance and increase the risk of type 2 diabetes. Overall, this review outlines various mechanisms that lead to the development of insulin resistance by OPs exposure. Â© 2014 Elsevier Ireland Ltd.","","","RefMan","","","","","","","","",""
"Unknown","Unknown","Unknown","Unknown","","","2010","Slager, R. E., Simpson, S. L., Levan, T. D., Poole, J. A., Sandler, D. P., Hoppin, J. A.","Rhinitis associated with pesticide use among private pesticide applicators in the agricultural health study","Journal of toxicology and environmental health. Part A","73(20):1382-93","0a577777-bc5b-4ee2-8625-fd5ba2ad8731","","Farmers commonly experience rhinitis but the risk factors are not well characterized. The aim of this study was to analyze cross-sectional data on rhinitis in the past year and pesticide use from 21,958 Iowa and North Carolina farmers in the Agricultural Health Study, enrolled 1993-1997, to evaluate pesticide predictors of rhinitis. Polytomous and logistic regression models were used to assess association between pesticide use and rhinitis while controlling for demographics and farm-related exposures. Sixty-seven percent of farmers reported current rhinitis and 39% reported 3 or more rhinitis episodes. The herbicides glyphosate [odds ratio (OR) = 1.09, 95% confidence interval (95% CI) = 1.05-1.13] and petroleum oil (OR = 1.12, 95% CI = 1.05-1.19) were associated with current rhinitis and increased rhinitis episodes. Of the insecticides, four organophosphates (chlorpyrifos, diazinon, dichlorvos, and malathion), carbaryl, and use of permethrin on animals were predictors of current rhinitis. Diazinon was significant in the overall polytomous model and was associated with an elevated OR of 13+ rhinitis episodes (13+ episodes OR = 1.23, 95% CI = 1.09-1.38). The fungicide captan was also a significant predictor of rhinitis. Use of petroleum oil, use of malathion, use of permethrin, and use of the herbicide metolachlor were significant in exposure-response polytomous models. Specific pesticides may contribute to rhinitis in farmers; agricultural activities did not explain these findings.","","","RefMan","","","","","","","","","",""
"Unknown","Unknown","Unknown","Unknown","","","2013","Koutros, S., Beane Freeman, L. E., Lubin, J. H., Heltshe, S. L., Andreotti, G., Barry, K. H., Dellavalle, C. T., Hoppin, J. A., Sandler, D. P., Lynch, C. F., Blair, A., Alavanja, M. C. R.","Risk of total and aggressive prostate cancer and pesticide use in the Agricultural Health Study","","177(1):59-74","eb7fa540-d94d-4f81-abfd-e5ba3d9e6463","","Because pesticides may operate through different mechanisms, the authors studied the risk of prostate cancer associated with specific pesticides in the Agricultural Health Study (1993-2007). With 1,962 incident cases, including 919 aggressive prostate cancers among 54,412 applicators, this is the largest study to date. Rate ratios and 95% confidence intervals were calculated by using Poisson regression to evaluate lifetime use of 48 pesticides and prostate cancer incidence. Three organophosphate insecticides were significantly associated with aggressive prostate cancer: fonofos (rate ratio (RR) for the highest quartile of exposure (Q4) vs. nonexposed = 1.63, 95% confidence interval (CI): 1.22, 2.17; Ptrend < 0.001); malathion (RR for Q4 vs. nonexposed = 1.43, 95% CI: 1.08, 1.88; Ptrend = 0.04); and terbufos (RR for Q4 vs. nonexposed = 1.29, 95% CI: 1.02, 1.64; Ptrend = 0.03). The organochlorine insecticide aldrin was also associated with increased risk of aggressive prostate cancer (RR for Q4 vs. nonexposed = 1.49, 95% CI: 1.03, 2.18; Ptrend = 0.02). This analysis has overcome several limitations of previous studies with the inclusion of a large number of cases with relevant exposure and detailed information on use of specific pesticides at 2 points in time.

Furthermore, this is the first time specific pesticides are implicated as risk factors for aggressive prostate cancer. Â© The Author 2012. Published by Oxford University Press on behalf of the Johns Hopkins Bloomberg School of Public Health. All rights reserved.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2009","Ahmed, T., Tripathi, A. K., Suke, S. G., Kumar, V., Ahmed, R. S., Das, S., Banerjee, B. D.","Role of HSP27 and reduced glutathione in modulating malathion-induced apoptosis of human peripheral blood mononuclear cells: ameliorating effect of N-acetylcysteine and curcumin","Toxicology in vitro : an international journal published in association with BIBRA","23(7):1319-25","fd6447f7-a6ea-4231-8661-3aa28d464c12","","Malathion exerts cholinergic effects at high doses. However, a consequence of low dose (non-cholinergic) exposure causes immunotoxicity and oxidative stress. Hence, this study was designed to find out (i) the cytotoxic and apoptotic effects of cholinergic and non-cholinergic doses of malathion using cultured peripheral blood mononuclear cells (PBMCs) and (ii) the role of GSH and HSP27 and (iii) protective effects of N-acetylcysteine (GSH inducer) and curcumin (HSP27 inducer). In low doses, malathion caused mild depletion of GSH, threefold increase in HSP27 level and a range bound cytotoxicity and apoptosis of PBMC. In contrast, cholinergic dose exposures caused severe GSH depletion and exhibited dose dependent cytotoxicity and necrosis without any significant effect on HSP27 levels. Curcumin increased the levels of HSP27 in PBMC only in presence of low doses and not at high doses of malathion. Both NAC and curcumin were able to prevent malathion-mediated apoptosis of PBMC effectively at non-cholinergic doses and at this concentration of malathion, HSP27 induction keeps apoptosis and GSH depletion under control. Also NAC and curcumin may act as potential therapeutic agents to prevent malathion-induced immunotoxicity.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2006","Burkhart, C. G., Burkhart, C. N.","Safety and efficacy of pediculicides for head lice","","5(1):169-179","ee70ae8a-fce1-4ed9-8711-83f838aa45bc","","Head lice infestation is a common and growing problem, primarily affecting school-aged children. There are growing numbers of treatment failures due to the emergence of treatment-resistant lice to the popular over-the-counter products that have been used for the past several decades. Resistance has also decreased the efficacy of lindane, a prescription pediculicide that has been commonly used for several generations. Malathion, recently reintroduced in the US as a prescription pediculicide, has been associated with some treatment resistance depending upon its formulation. Other insecticidal treatments, such as ivermectin, will have to be developed further, given the limited options presently available for the treatment of head lice. Given the number of anecdotal and market-driven reported studies on head lice, assessment of topical lice therapies requires standardised in vitro testing. Based on concerns about safety and decreasing efficacy due to resistance, a reassessment of the general topic of pediculicides for head lice is warranted. Â© 2006 Ashley Publications.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2012","Russo, M. V., Avino, P., Cinelli, G., Notardonato, I.","Sampling of organophosphorus pesticides at trace levels in the atmosphere using XAD-2 adsorbent and analysis by gas chromatography coupled with nitrogen-phosphorus and ion-trap mass spectrometry detectors","Analytical and bioanalytical chemistry","404(5):1517-27","cfe8afe7-ec79-4d5b-95bd-5b0a0c7fff41","","This paper shows an analytical methodology based on solid-phase extraction by XAD-2 adsorbent and gas chromatography (GC) coupled with nitrogen-

phosphorus (NPD) and ion-trap mass spectrometry detectors (ITMS) in negative chemical ionization (NCI) mode analyses for investigating organophosphorus pesticides (OPs) at trace levels (in nanograms per cubic meter) in the atmosphere: in particular, we set up a procedure for analyzing 38 OPs. For the analytical methodology linearity responses have been obtained in GC-NPD (r > 0.9982) and GC-NCI/ITMS (r > 0.9974) in a large linearity range (0.10-500 pg muL(-1) in both cases) whereas the limits of detection range between 0.01 and 0.03 pg muL(-1) in both the techniques with a relative standard deviation (RSD) below 9.0 in both cases. Particular attention has been devoted to investigate the effect of different solvents (n-hexane, benzene, chloroform, carbon disulfide, acetonitrile) on the OP recovery as well the breakthrough volumes have been evaluated (100% recovery up to 4,286 L g(-1)). The study has also investigated the OP recoveries at different sampling flow rates (1.5 and 2.0 L min(-1)) for determining the optimal conditions for sample collection. Finally, the whole approach has been successfully applied to real samples collected in four different areas in the Molise region (Central Italy) during different seasons: the results show that parathion-ethyl, dimethoate, omethoate, and malathion are present in all periods at low levels (ranging between 70 and 10 ng m(-3)): their levels in such periods can be correlated with spraying as well atmospheric conditions favoring the dispersion/accumulation of these pollutants.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2008","Tjioe, M., Vissers, W. H. P. M.","Scabies outbreaks in nursing homes for the elderly: Recognition, treatment options and control of reinfestation","","25(4):299-306","ffaf6e54-a8d9-45cb-acd3-e57efaacf1e3","","The scabies mite is an ectoparasite able to infest humans. Its clinical presentation is typical, although in immunocompromised, mentally retarded and elderly patients the clinical presentation may be altered. Diagnosis may therefore be difficult in such patient groups, who often reside in nursing homes. Because delay in diagnosis may induce rapid spread of the scabies mite, immediate diagnosis and treatment are necessary. Normal scabies (scabies vulgaris) and crusted scabies (scabies crustosa, scabies norvegica), although sometimes difficult to diagnose, especially in the elderly, are fortunately quite easy to treat. However, the elderly patient may experience toxicity from local or systemic scabicidal treatment. Single cases of scabies vulgaris should be treated with permethrin cream because of its outstanding efficacy and favourable adverse events profile. Scabies outbreaks and cases of scabies crustosa can easily be managed using combination therapy consisting of topical application of permethrin and two oral doses of ivermectin 200 Î¼g/kg (administered 1 week apart). In addition to treatment of the scabies infestation, preventative measures are necessary, particularly in nursing homes. Â© 2008 Adis Data Information BV. All rights reserved.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2012","Golant, A. K., Levitt, J. O.","Scabies: a review of diagnosis and management based on mite biology","Pediatrics in review / American Academy of Pediatrics","33(1):e1-e12","f32523ec-9864-43a9-a049-cabf95157a3e","","Scabies is a contagious parasitic dermatitis that is a significant cause of morbidity, especially outside of the United States. Scabies is diagnosed most often by correlating clinical suspicion with the identification of a burrow. Although scabies should be on the differential for any patient who presents with a pruritic dermatosis, clinicians must consider a wide range of diagnostic possibilities. This approach will help make scabies simultaneously less over- and underdiagnosed by clinicians in the community. Atypical or otherwise complex presentations may

necessitate the use of more definitive diagnostic modalities, such as microscopic examination of KOH prepared skin scrapings, high-resolution digital photography, dermoscopy, or biopsy. Scabies therapy involves making the correct diagnosis, recognizing the correct clinical context to guide treatment of contacts and fomites, choosing the most effective medication, understanding how to use the agent properly, and following a rational basis for when to use and reuse that agent. Although the development of new therapeutic agents is always welcome, tried and true treatments are still effective today. Permethrin is the gold standard therapy, with malathion being an excellent topical alternative. Ivermectin is an effective oral alternative that is especially useful in crusted scabies, patients who are bed ridden, and in institutional outbreaks. Despite the availability of effective therapeutics, treatment failures still occur, mostly secondary to application error (ie, failure to treat the face and scalp or close contacts, failure to reapply medication) or failure to decontaminate fomites. Because increasing resistance to scabies treatments may be on the horizon, we propose that standard of care for scabies treatment should involve routine treatment of the scalp and face and re-treating patients at day 4 on the basis of the scabies life cycle to ensure more efficient mite eradication. Practitioners should attempt to treat all close contacts simultaneously with the source patient. To eradicate mites, all fomites should be placed in a dryer for 10 minutes on a high setting, furniture and carpets vacuumed, and nonlaunderables isolated for a minimum of 2 days, or, for those who wish to be rigorous, 3 weeks.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2009","Hayashi, Y.","Scientific basis for risk analysis of food-related substances with particular reference to health effects on children","","34(2 SPEC. ISS.):SP201-SP207","bfbfe266-cf69-4f21-a14d-99115e2b60ce","","Based on the advance of toxicology and related sciences, a regulatory regime for the safety of chemicals related to daily life has been rapidly established. Especially for the food-related substances, the process of risk analysis has facilitated the collaboration by all the players including consumers toward the security of their safety. On the other hand, except for pharmaceuticals, science-based decisions and governmental actions on safety issues have not always gained confidence of the public. One of the reasons was the inadequacy in the way of use of scientific knowledge, or in other words, inappropriateness of decision making by ""the regulatory science"". Regulatory science is a science to warrant the decision making processes for governmental acts (Mitsuru Uchiyama). In the case of chemical safety, it can be redefined as a theoretical concept to complements the uncertainty of scientific knowledge for the decision of governmental acts that is adequate in both scientific and social ways. Therefore, the regulatory science is an indispensable discipline to effectively apply risk analysis. Here, the significance of the regulatory science for the hazard assessment of the chemicals, especially for children is described. In the past, the hazard effects of chemicals have been assessed for adults. Recently, however, the importance of the assessment for children has gained international emphases. Not only for pharmaceuticals, but for food-related substances, the acceptable daily intake (ADI) and tolerable daily intake (TDI) are often set differently for adults and children. The child-specific responses against chemicals are related not only to the physiological factors such as body weight, basal metabolism, but also rapid growth of the body with developmental status of various organs. General knowledge on these issues will be discussed mainly referring the World Health Organization (WHO) documents. Although the cutting edge technology backs up the development of toxicology, it would

appear that it is reaching a turning point from technology-centrism to look toward the direction for contribution to society from the stand point of regulatory science.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","1999","Sweeney, M. I., Lyon, M. E.","Selective effect of malathion on blood coagulation versus locomotor activity","Journal of environmental pathology, toxicology and oncology : official organ of the International Society for Environmental Toxicology and Cancer","18(3):203-11","b68472f5-105a-4e97-83f9-b09d5829604a","","The objective of this study was to compare the neurotoxic effects of acute malathion exposure with the potential blood coagulation effects. We administered various doses of malathion to Wistar rats by i.p. injection, and then we assessed the effects on blood coagulation screening tests and activity in the open field locomotor test. The activated partial thromboplastin time (APTT), but not the prothrombin time (PT), was significantly prolonged by up to 6.6 seconds (38% of the preinjection value) after the administration of malathion (3-75 mg/kg; 1-25% of the LD50). This effect was observed 5 minutes after injection and persisted for at least 3 hours. In contrast, no effect was observed on the general locomotor activity, movement, rearing, or stereotopy during 3 hours after the i.p. administration of the same doses of malathion. Our data indicate that malathion affects blood clotting before the nervous system (locomotor) function.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2010","Brill, J. R.","Sexually Transmitted Infections in Men","","37(3):509-525","9de2b0e2-9d5e-4fce-8d89-2f10abff0477","","Sexually transmitted infections (STIs) cause tremendous morbidity, great costs, and numerous avoidable deaths in the United States each year. STIs in men can present as discharge, ulcers, papules, infestations, or systemic disease, but most commonly STIs present without any symptoms. Molecular techniques, single-dose antibiotics and antivirals, and patient-administered therapies present opportunities for enhanced diagnosis and treatment. Screening for STIs should be part of all primary care practices, specifically targeting high-risk persons and those diagnosed with another STI. Â© 2010.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2014","Manimegalai, G., Shanthakumar, S., Sharma, C.","Silver nanoparticles: synthesis and application in mineralization of pesticides using membrane support","","4(2)","33b02bd5-c71a-4bd5-9983-89fd88a5d706","","Pesticides are deliberately used for controlling the pests in agriculture and public health, due to which, a part of it is present in the drinking water. Due to their widespread use, they are present in both surface and ground water. Most of the pesticides are resistant to biodegradation and are found to be carcinogenic in nature even at trace levels. Conventional methods of pesticide removal are disadvantageous due to their inherent time consumption or expensiveness. Nanoparticles alleviate both of these drawbacks and hence, they can be effectively utilized for the mineralization of pesticides. To prevent the presence of nanoparticles in the purified water after mineralization of pesticides, they need to be incorporated on a support. In earlier studies, researchers employed activated carbon and alumina as support for silver nanoparticles in pesticide mineralization. However, not many studies have been carried out on polymeric membranes as support for silver nanoparticles in the mineralization of pesticides (chlorpyrifos and malathion). With this in view, a detailed study has been carried out to estimate the mineralization potential of silver nanoparticles (synthesized using glucose) supported on cellulose acetate membrane. It

is observed that the silver nanoparticles can effectively mineralize the pesticides, and the concentration of nanoparticles enhances the rate of mineralization.","","","RefMan","","","","","","","","","" "Unknown","Unknown","Unknown","Unknown","","","2012","Yu, W. W., White, I. M.","A simple filter-based approach to surface enhanced Raman spectroscopy for trace chemical detection","The Analyst","137(5):1168-73","3fef321b-a1f4-42ab-b4b7-3e4310a03c1d","","We demonstrate an extremely simple and practical surface enhanced Raman spectroscopy (SERS) technique for trace chemical detection. Filter membranes first trap silver nanoparticles to form a SERS-active substrate and then concentrate analytes from a mL-scale sample into a muL-scale detection volume. We demonstrate a significant improvement in detection limit as compared to colloidal SERS for the pesticide malathion and the food contaminant melamine. The measured SERS intensity exhibits low variation relative to traditional SERS techniques, and the data can be closely fit with a Langmuir isotherm. Thus, due to the simple procedure, the low-cost of the substrates, the quantitative results, and the performance improvement due to analyte concentration, our technique enables SERS to be practical for a broad range of analytical applications, including field-based detection of toxins in large-volume samples.","","","RefMan","","","","","","","","","" "Unknown","Unknown","Unknown","Unknown","","","2010","Afsar, F. S.","Skin infections in developing countries","","22(4):459-466","414f6623-574a-4044-9ade-e27388a6cafd","","Purpose of review: In developing countries, where the majority of people have a low income and live in resource-poor settings, skin infections are prevalent. Data from recent studies provide insight into the most common skin infections and their management. Recent findings: Several studies confirm that skin infections account for the majority of pediatric mortality and morbidity in developing countries. They are prevalent in resource-poor settings and rural areas in certain parts of the world. Also, hot, humid climates and overcrowding predispose to skin infections. Most of the skin infections are curable with effective medication. Summary: Skin infections are of particular importance in developing countries. This review focuses on the most common skin infections and summarizes the most recent knowledge on the epidemiology, morbidity, and treatment in resource-poor settings. Â© 2010 Wolters Kluwer Health | Lippincott Williams & Wilkins.","","","RefMan","","","","","","","","","" "Unknown","Unknown","Unknown","Unknown","","","2011","Pahwa, P., Karunanayake, C. P., Dosman, J. A., Spinelli, J. J., McLaughlin, J. R.","Soft-tissue sarcoma and pesticides exposure in men: Results of a canadian case-control study","","53(11):1279-1286","4b462cce-af32-4cb8-acf4-3a934c686ea1","","Objectives: The objective was to investigate the putative associations of specific pesticides with soft-tissue sarcoma (STS). METHODS: A Canadian population-based case-control study conducted in six provinces was used in this analysis. The study design consisted of two stages: a self-administered postal questionnaire and a telephone interview for those reporting pesticides exposure of 10 hours per year or more; and a 15% random sample of the remainder. Conditional logistic regression was used to fit the statistical models. RESULTS: A positive history of cancer among first-degree relatives and exposure to aldrin and diazinon were statistically significant independent predictors of an increased risk for STS, whereas diagnosis of whopping cough lowered the risk of STS. CONCLUSIONS: The incidence of STS was associated with specific insecticides after adjustment for other independent predictors. Copyright Â© 2011 by American College of

Occupational and Environmental Medicine.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2003","Souza, D. A., Lancas, F. M.","Solventless sample preparation for pesticides analysis in environmental water samples using solid-phase microextraction-high resolution gas chromatography/mass spectrometry (SPME-HRGC/MS)","Journal of environmental science and health. Part. B, Pesticides, food contaminants, and agricultural wastes","38(4):417-28","8ec16db5-7071-4731-97fc-35b2704cf2a3","","Solid-phase micro-extraction (SPME) coupled on line with high resolution gas chromatography and mass spectrometric detection is described for the analysis of pesticides in environmental water samples. Experiments were performed in order to optimize the SPME extraction conditions for selected pesticides including tiomethon, trichorfon, dimethoate, diazinon, malathion, dicofol, methidathion, ethion, bromopropylate and pyrazophos from spiked water solutions. To enhance the SPME efficiency, experimental conditions including the fiber composition, stirring rate, temperature, adsorption time, desorption time and salt concentration were optimized. After validation, the SPME-GC/MS methodology was applied to real-world environmental water samples.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2003","Brand, R. M., Pike, J., Wilson, R. M., Charron, A. R.","Sunscreens containing physical UV blockers can increase transdermal absorption of pesticides","Toxicology and industrial health","19(1):9-16","0e6817e7-c93a-480c-bb1e-68eb0e3bf448","","People are encouraged to wear sunscreens because of their effectiveness at reducing the risk of skin cancer. The dermal penetration of the herbicide 2,4-D can be enhanced by commercial formulations containing chemical ultraviolet (UV) absorbers, the absorbers themselves and the insect repellent DEET. This work has been extended to determine whether commercially available sunscreens containing the physical UV absorbers titanium dioxide (TiO2) or zinc oxide (ZnO) enhance the transdermal absorption of pesticides. Hairless mouse skin was pretreated with either commercially available sunscreens or the UV absorbers themselves, dissolved in phenyl trimethicone. In vitro permeability studies were performed with the pesticides 2,4-D, paraquat, parathion or malathion. The data demonstrate that pretreatment with five of the nine sunscreens tested increased the transdermal absorption of 2,4-D ($P<0.05$). Transdermal studies using paraquat, parathion and malathion pretreated with a representative sunscreen all demonstrated significant penetration enhancement when compared to controls ($P<0.05$). Repeated 2,4-D and sunscreen applications resulted in either no change between pulses or an increase in absorption after the second pulse depending on the washing regimen. Examining penetration of individual UV absorbers formulated in phenyl trimethicone showed that that ZnO can impede 2,4-D penetration and TiO2 had no effect. Combining UV absorbers in the presence of trimethicone resulted in 'sunscreens' that could actually inhibit 2,4-D penetration. Inert ingredients therefore control the increased absorption seen in commercial sunscreen products and this enhancement can be eliminated by substituting phenyl trimethicone as the solvent. Sunscreen use must still be encouraged even with the undesirable side effect of increased penetration through the skin.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2011","Yu, Y., Yang, A. M., Zhang, J. H., Hu, S. K., Yan, H.","[Synergistic effect of dichlorvos, dimethoate and malathion mixture on reproduction toxicity in male mice]","","45(9):810-814","5edbade5-a386-433b-a68e-2470afeb80f1","","To evaluate the reproduction toxicity of the mixture composed of dichlorvos, dimethoate and malathion synergistic effect on male mice, and further

explore its possible mechanisms. The 105 male mice were divided into 7 groups, including control (0 mg/kg), mix low (10.8 mg/kg), mix medium (21.5 mg/kg), mix high dose (43.0 mg/kg), dichlorvos (5.1 mg/kg), dimethoate (12.6 mg/kg) and malathion (25.3 mg/kg) group. The oral gavage for successive 35 days, and the mice were sacrificed on the 36(th) day. The body weight, and the quantity, activity and morphology of sperms were examined. The levels of sexual hormone were measured, including testosterone (T), follicle stimulating hormone (FSH), luteinizing hormone (LH) and estradiol (E(2)). Pathological changes of testicle and epididymis were observed by morphology, pathology and electron microscope. After 14 days exposure, the body weights of the mice were lower in the mix-high dose group ((22.40 Â± 3.07) g) than those in control group ((26.73 Â± 2.82) g) ($P < 0.05$). After 28 days exposure, the body weights of the mice were also lower in the mix-medium dose group ((30.00 Â± 4.93) g) than those in control group ((33.13 Â± 3.29) g) ($P < 0.05$). The sperm counts and sperm motility decreased significantly as the toxic concentration arised. Comparing to control group ((373.33 Â± 14.65)Ã-10(6)/g weight of epididymis and (75.17 Â± 7.68)%), the spermatozoa count and sperm motility had decreased in mix-medium and mix-high dose groups ((321.17 Â± 18.19)Ã-10(6)/g weight of epididymis, (225.00 Â± 19.67)Ã-10(6)/g weight of epididymis, and (64.67 Â± 9.91)%, (57.83 Â± 9.66)%), and the sperm abnormality rates were higher in mix-medium and mix-high groups ((43.33 Â± 8.66)â€° and (55.00 Â± 13.80)â€°) comparing to those in control group ((32.67 Â± 8.17)â€°). Compared to those in control group (FSH (1.41 Â± 0.20), E(2)(17.32 Â± 2.72), LH (8.75 Â± 1.32) and T (3.45 Â± 0.80) nmol/L), the serum level of FSH (3.14 Â± 0.62) and (3.85 Â± 0.37) nmol/L, E(2) (36.81 Â± 6.68) and (43.76 Â± 9.82) nmol/L in mix-medium and mix-high dose group increased ($P < 0.01$), while the level of LH (5.21 Â± 1.23) and (4.27 Â± 1.09) nmol/L and T (1.37 Â± 0.38) and (0.73 Â± 0.18) nmol/L decreased ($P < 0.01$). The morphological and ultramicrostructure results of testicle and epididymis indicated that the mature sperm numbers were decreased, and the cacoplastic sperm head and the tail of spermatozoon were observed in mix-high dose groups. The dichlorvos, dimethoate and malathion mixture had synergistic reproductive toxicity to the testicle and epididymis structure and function, and thus leading to the process of generation cell cytopoiesis abnormalities, simultaneously the hypothalamus-pituitary-gonad axis were also affected and thus resulted in parasecretion.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2012","Calaf, G. M., Echiburu-Chau, C.","Synergistic effect of malathion and estrogen on mammary gland carcinogenesis","Oncology reports","28(2):640-6","f0f1a4bf-5616-4ebc-8b21-9fb7101e443a","","Breast cancer is the most frequent malignancy diagnosed in women and is a classical model of hormone-dependent malignancy. Over the past 15-20 years, epidemiological studies have pointed to an increased breast cancer risk associated with prolonged exposure to female hormones. On the other hand, environmental chemicals such as malathion, an organophosphorous pesticide used to control a wide range of sucking and chewing pests of field crops, may be involved in the etiology of breast cancers. Results indicated that estrogen alone increased average number of lobules per mm2 of rat mammary glands in comparison to control and malathion alone at 30, 124, 240 and 400 days after 5-day treatments. On the other hand, malathion alone significantly increased the number of ducts in stage of proliferation at 10-240 days after 5-day treatments. Furthermore, markers for cancer detection such as mutant p53, c-myc, c-fos and CYPs proteins were overexpressed after treatments. Atropine, an anticholinergic drug, counteracted these effects when it was combined with malathion under similar

conditions. The combination of malathion and estrogen synergistically increased number of lobules and ducts per mm2 of rat mammary glands after treatments and inducing mammary cancer. It can be concluded that combination of an environmental substance such as the pesticide malathion and an endogenous substance such as estrogen can enhance the deleterious effects in human mammary glands inducing cancer and atropine is able to diminish these effects.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2013","Yonar, S. M.","Toxic effects of malathion in carp, Cyprinus carpio carpio: protective role of lycopene","Ecotoxicology and environmental safety","97:223-9","929c372f-5450-44d7-8e17-d0a2a19d64cc","","The present study was carried out in order to investigate the potential protective effects of lycopene against malathion-induced toxicity in carp. The fish were exposed to sublethal concentrations of malathion (0.5 and 1mgL(-1)) for 14 days, and lycopene (10mgkg(-1) of fish weight) was simultaneously administered. Samples of the blood and tissue (liver, kidneys, and gills) were collected at the end of the experimental period and their haematological profiles [red blood cell (RBC) counts, haemoglobin (Hb) concentrations, haematocrit (Ht) levels, and erythrocyte indices, including the mean corpuscular volume (MCV), the mean corpuscular haemoglobin (MCH) and the mean corpuscular haemoglobin concentration (MCHC)], immune responses [white blood cell (WBC) counts, oxidative radical production (nitroblue tetrazolium (NBT) activity), total plasma protein (TP) and total immunoglobulin (TI) levels and phagocytic activities (PA)] and oxidant/antioxidant statuses [malondialdehyde (MDA) levels, superoxide dismutase (SOD), catalase (CAT) and glutathione peroxidase (GSH-Px) activities, and reduced glutathione (GSH) concentrations] were analysed. The findings of the present study demonstrated that the exposure of carp to malathion resulted in alterations in the haematological profiles and immune responses, and lead to increased reactive oxygen species formation, resulting in oxidative damage and inhibition of the antioxidant capacities. However, the administration of lycopene prevented malathion-induced toxic effects.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","1995","Delaney, J. M., Wilkins, R. M.","Toxicity of microcystin-LR, isolated from Microcystis aeruginosa, against various insect species","Toxicon : official journal of the International Society on Toxinology","33(6):771-8","537d2035-150c-4d7e-8788-db879c9bda03","","Microcystin-LR (MC-LR), isolated from the cyanobacterium Microcystis aeruginosa Kuetzing emend. Elenkin strain CCAP 1450/4 was tested for biological activity against four species of insect and the invertebrate Artemia salina. The efficacy of pesticidal activity was compared with various insecticides. The 24 hr LD50 value for third instar diamond-backed moth, Plutella xylostella, on ingestion from a treated leaf surface was 1.0 micrograms cm2, compared with a 72 hr LD50 value for rotenone of 2.0 micrograms cm-2. The 24 hr LD50 values of MC-LR and malathion on intrathoracic injection into adult house flies (Musca domestica) were 0.5 and 3.7 mg kg-1, respectively. MC-LR had no effect on M. domestica when applied topically at dosages up to 32 mg kg-1. MC-LR and malathion gave 24 hr LD50 values of 4.7 and 13.1 mg kg-1, respectively when injected into third instar cotton leafworm (Spodoptera littoralis). In fourth instar cabbage white butterfly larvae (Pieris brassicae) MC-LR injected gave 24 and 48 hr LD50 values of 3.9 and 1.9 mg kg-1, respectively, whilst the 24 and 48 hr LD50 values for carbofuran were 0.4 and 0.3 mg kg-1, respectively. An immersion bioassay with 1-day-old brine shrimp larvae (Artemia salina) gave 24 hr LD50 values of 3.8 micrograms ml-1 for MC-LR and 1.8 micrograms ml-1 for carbofuran. MC-LR has appreciable insect toxicity,

comparable to the three insecticides tested. The toxin look 24-48 hr to exert its full lethal effect in insects, much longer than the 1-3 hr it takes in mammals. The potential use of MC-LR as an insecticide is discussed.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2011","Misra, J. R., Horner, M. A., Lam, G., Thummel, C. S.","Transcriptional regulation of xenobiotic detoxification in Drosophila","Genes & development","25(17):1796-806","6969f882-a682-42a5-a8e5-76fef7afffc9","","Living organisms, from bacteria to humans, display a coordinated transcriptional response to xenobiotic exposure, inducing enzymes and transporters that facilitate detoxification. Several transcription factors have been identified in vertebrates that contribute to this regulatory response. In contrast, little is known about this pathway in insects. Here we show that the Drosophila Nrf2 (NF-E2-related factor 2) ortholog CncC (cap 'n' collar isoform-C) is a central regulator of xenobiotic detoxification responses. A binding site for CncC and its heterodimer partner Maf (muscle aponeurosis fibromatosis) is sufficient and necessary for robust transcriptional responses to three xenobiotic compounds: phenobarbital (PB), chlorpromazine, and caffeine. Genetic manipulations that alter the levels of CncC or its negative regulator, Keap1 (Kelch-like ECH-associated protein 1), lead to predictable changes in xenobiotic-inducible gene expression. Transcriptional profiling studies reveal that more than half of the genes regulated by PB are also controlled by CncC. Consistent with these effects on detoxification gene expression, activation of the CncC/Keap1 pathway in Drosophila is sufficient to confer resistance to the lethal effects of the pesticide malathion. These studies establish a molecular mechanism for the regulation of xenobiotic detoxification in Drosophila and have implications for controlling insect populations and the spread of insect-borne human diseases.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2006","Bertelsen, K., Jakobsen, A., Herrstedt, J., Petersen, L. K., HÃ¸lund, B., Hansen, E. S., Andersen, E. S., Knudsen, J. B., Thomsen, L. N.","Treatment of cervix cancer with radical hysterectomy is a task for district departments","","168(6):600; author reply 600-601","a2f85ec7-dbcb-42ea-9dc0-8ceec3e6bb0e","","","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","1998","Walker, C. H.","The use of biomarkers to measure the interactive effects of chemicals","Ecotoxicology and environmental safety","40(1-2):65-70","2db009fb-8d0c-4197-bdb1-cf7f0515f0e3","","Biomarker assays that provide measures of the toxic effects of chemicals on key organisms are of particular interest in ecotoxicology and environmental risk assessment. Typically, such assays provide measures of the molecular mechanisms that underlie toxicity (e.g., inhibition of brain acetylcholinesterase activity by organophosphorus insecticides and retardation of the vitamin K cycle by anticoagulant rodenticides). They are particularly valuable for detecting and quantifying toxicity where organisms are exposed to mixtures of compounds and for identifying cases of potentiation. In birds, inhibition of brain acetylcholinesterase activity can provide an index of potentiation of organophosphorus and carbamate insecticides by other pesticides. Inhibition of serum butyrylcholinesterase also is very useful as a nondestructive assay but is not simply related to inhibition of brain acetylcholinesterase. Assays for DNA damage can indicate where there is an increase in the rate of activation of carcinogens and mutagens due to induction of the cytochrome P450 system. Assays for blood levels of retinol (vitamin A) and thyroxine can establish

thyroxine antagonism by metabolites of 3,3,4,4-tetrachlorobiphenyl. Assays for changes in levels of clotting protein in serum can give an indication of the effect of mixtures of anticoagulant rodenticides on the vitamin K cycle. The interactive effects of mixtures of pesticides in the field are starting to be investigated by this approach (e.g., a recent study of the combined action of malathion and prochloraz in the red-legged partridge).","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2008","Zhu, H., Rusyn, I., Richard, A., Tropsha, A.","Use of cell viability assay date improves the prediction accuracy of conventional quantitative structure-activity relationships models of animal carcinogenicity","","116(4):506-513","d2f53a60-d178-4ac7-9948-7ce5ba677b4d","","Background: To develop efficient approaches for rapid evaluation of chemical toxicity and human health risk of environmental compounds, the National Toxicology Program (NTP) in collaboration with the National Center for Chemical Genomics has initiated a project on high-throughput sceening (HTS) of environmental chemicals. The first HTS results for a set of 1,408 compounds tested for their effects on cell viability in six: different cell lines have recently become available via PubChem. Objective: We have explored these data in terms of their utility for predicting adverse health effects of the environmental agents. Methods and Results: Initially the classification k nearest neighbor (kNN) quantitative structure-activity relationship (QSAR) modeling method was applied to the HTS data only, for a cutated data set of 384 compounds. The resulting models had prediction accuracies for training, test. (containing 275 compounds together), and external validation (109 compounds) sets as high as 89%, 71%, and 74%, respectively. We then asked if HTS results could be of value in predicting rodent carcinogenicity. We identified 383 compounds for which data were available from both the Berkeley Carcinogenic Potency Database and NTP-HTS studies. We found that compounds classified by HTS as ""actives"" in at least one cell line were likely to be rodent carcinogens (sensitivity 77%); however, HTS ""inactives"" were far less informative (specificity 46%). Using chemical descriptors only, kNN QSAR modeling resulted in 62.3% prediction accuracy for rodent carcinogenicity applied to this data set. Importantly, the prediction accuracy of the model was significantly improved (72.7%) when chemical descriptors were augmented by HTS data, which were regarded as biological descriptors. Conclusions: Our studies suggest that combining NTP-HTS profiles with conventional chemical descriptors could considerably improve the predictive power of computational approaches in toxicology.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2008","Persad, A. S., Cooper, G. S.","Use of epidemiologic data in Integrated Risk Information System (IRIS) assessments","","233(1):137-145","5f4b541f-9a71-45a3-8a38-0b30526c3b93","","In human health risk assessment, information from epidemiologic studies is typically utilized in the hazard identification step of the risk assessment paradigm. However, in the assessment of many chemicals by the Integrated Risk Information System (IRIS), epidemiologic data, both observational and experimental, have also been used in the derivation of toxicological risk estimates (i.e., reference doses [RfD], reference concentrations [RfC], oral cancer slope factors [CSF] and inhalation unit risks [IUR]). Of the 545 health assessments posted on the IRIS database as of June 2007, 44 assessments derived non-cancer or cancer risk estimates based on human data. RfD and RfC calculations were based on a spectrum of endpoints from changes in enzyme activity to specific neurological or dermal effects. There are 12 assessments with IURs based on

human data, two assessments that extrapolated human inhalation data to derive CSFs and one that used human data to directly derive a CSF. Lung or respiratory cancer is the most common endpoint for cancer assessments based on human data. To date, only one chemical, benzene, has utilized human data for derivation of all three quantitative risk estimates (i.e., RfC, RfD, and dose-response modeling for cancer assessment). Through examples from the IRIS database, this paper will demonstrate how epidemiologic data have been used in IRIS assessments for both adding to the body of evidence in the hazard identification process and in the quantification of risk estimates in the dose-response component of the risk assessment paradigm.","","","RefMan","","","","","","","","","","","Unknown","Unknown","Unknown","Unknown","","","2005","Tuschl, H., Schwab, C. E.","The use of flow cytometric methods in acute and long-term in vitro testing","Toxicology in vitro : an international journal published in association with BIBRA","19(7):845-52","18c2a3b2-48d8-4f08-b298-a49284398aa3","","One principal demand for in vitro screening for toxic effects is the ease of performance and the high throughput of test methods. Flow cytometry offers the possibility to study several parameters simultaneously, e.g. cell cycle modulation, mode of cell death, activity of mitochondria. Aim of the present study was to assess the suitability of flow cytometry for the determination of cytotoxicity of test chemicals. Six chemicals chosen from the MEIC list (acetaminophen, isoniazid, paraquat, malathion, digoxin and 2,4-dichlorophenoxy acetic acid) were tested in HepG2, AAH-1, YAC-1 cells and human lymphocytes. Chemicals were applied for 24, 48 h or 28 days. The phases of the cell cycle were determined and the induction of apoptosis and necrosis was demonstrated by annexin binding, analysis of mitochondrial membrane potential and DNA strand breaks. The results of the present study show that flow cytometric methods are well suited to screen for the cytotoxicity of chemicals, both in adherent cells and cells grown in suspension.","","","RefMan","","","","","","","","","","","Unknown","Unknown","Unknown","Unknown","","","2005","Vargas, R. I., Stark, J. D., Mackey, B., Bull, R.","Weathering trials of Amulet cue-lure and Amulet methyl eugenol ""attract-and-kill"" stations with male melon flies and oriental fruit flies (Diptera: Tephritidae) in Hawaii","Journal of economic entomology","98(5):1551-9","11d95ad4-496b-4100-93d5-ae9775a810bf","","Amulet C-L (cue-lure) and Amulet ME (methyl eugenol) molded paper fiber ""attract-and-kill"" dispensers containing fipronil were tested under Hawaiian weather conditions against Bactrocera cucurbitae (Coquillett) (melon fly) and Bactrocera dorsalis (Hendel) (oriental fruit fly), respectively. In paired tests (fresh versus weathered), C-L dispensers were effective for at least 77 d, whereas ME dispensers were effective for at least 21 d. Thus, C-L dispensers exceeded, whereas ME dispensers did not meet the label interval replacement recommendation of 60 d. Addition of 4 ml of ME to 56-d-old ME dispensers restored attraction and kill for an additional 21 d. This result suggested the fipronil added at manufacture was still effective. By enclosing and weathering ME dispensers inside small plastic bucket traps, longevity of ME dispensers was extended up to 56 d. Fipronil ME and C-L dispensers also were compared, inside bucket traps, to other toxicants: spinosad, naled, DDVP, malathion, and permethrin. Against B. dorsalis, fipronil ME dispensers compared favorably only up to 3 wk. Against B. cucurbitae, fipronil C-L dispensers compared favorably for at least 15 wk. Our results suggest that fipronil C-L dispensers can potentially be used in Hawaii; however, fipronil ME dispensers need to be modified or protected from the effects of weathering to extend longevity and meet label specifications. Nonetheless,

Amulet C-L and ME dispensers are novel prepackaged formulations containing C-L or ME and fipronil that are more convenient and safer to handle than current liquid insecticide formulations used for areawide suppression of B. dorsalis and B. cucurbitae in Hawaii.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2010","Martin, L.","What's new in dermatological treatments?","","137(SUPPL. 4):S165-S176","59c6b90f-d3f0-4610-b40f-0526872f2e54","","Although the isolated clinical cases published are sometimes helpful in individual situations in which the therapeutic options have been exhausted, this type of publication cannot be generalized. For this reason, the selection presented covering the period from November 2009 to October 2010 is to a very large extent based on controlled trials, either because they contribute important information or because they raise great hope for a significant number of patients. For the first time in cutaneous oncology, a treatment (ipilimumab) has significantly increased overall survival in patients with metastatic melanoma (phase III), although this gain remains modest (4-6 months) and adverse immunological effects are frequent (30-40%). A phase I trial with treatment specifically targeting the mutant BRAF protein has shown an objective response in 81% of the patients treated in the metastatic phase of melanoma, thus allowing its development to be pursued. Grouping two studies in a rare tumor such as dermatofibrosarcoma also gives hope with imatinib as a neoadjuvant treatment when the initial tumor is inoperable, with, however, an inconsistent response of approximately 50% and only if the tumor presents reorganization of chromosomes 17 and 22. Cutaneous inflammatory diseases are still dominated by dual therapies in psoriasis, with, notably, an effectiveness trial on etanercept at different doses not showing a difference in efficacy depending on dose for the joint component of psoriasis, but also by the publication of a direct comparison of two dual therapies, ustekinumab versus etanercept. In atopic dermatitis, a controversial article invites one to reflect upon the progress made in the management of children by clinical nurses, as in the Netherlands and in Great Britain, in an attempt to contend with the shortage of dermatologists. Since the use of biotherapies is not the prerogative of psoriasis, infliximab was assessed in a phase II trial in Verneuil disease without demonstrating significant efficacy on the main criterion, but it did show a tendency to reduce the score used. This trial suffered from a weakness both in methodology and statistical power, thus precluding any conclusion. The rarity of therapeutic trials on drug eruptions warrants their mention. A French phase II study gives a glimpse of a trend toward efficacy in terms of survival in the treatment of toxic epidermal necrolysis with cyclosporine. As for infectious dermatosis and sexually transmitted infections, a French multicenter study has shown significantly higher efficacy with ivermectin than with malathion in treating pediculosis without increasing the side effects. Today, however, this systemic treatment cannot be a first-line treatment outside of certain specific situations. A large cohort study (somewhat unsatisfactory in its methodology) has not demonstrated the teratogenicity of antiherpes treatments in 830,000 infants. In prevention of HIV transmission, no microbicidal gel had shown efficacy to date. This has now been accomplished in South Africa with a 1% tenofovir gel. The results of a preliminary trial on therapeutic vaccination against HPV16 proposed to women who are carriers of cervical intraepithelial neoplasia opens the way for wide vaccine therapy of cutaneous virus-induced neoplasia. In conclusion, several articles analyzing the dermatology literature provide an opportunity to reflect on the quality of such articles, Boutron's being absolutely in-dis-pen-sa-ble! Â© 2010 Elsevier Masson SAS.

All rights reserved.","","","RefMan","","","","","","","","","","
"Unknown","Unknown","Unknown","Unknown","","","2006","Weschler, C. J., Wells, J. R., Poppendieck, D., Hubbard, H., Pearce, T. A.","Workgroup report: Indoor chemistry and health","","114(3):442-446","2167a470-bdbf-4094-81a4-30330b9a99b5","","Chemicals present in indoor air can react with one another, either in the gas phase or on surfaces, altering the concentrations of both reactants and products. Such chemistry is often the major source of free radicals and other short-lived reactive species in indoor environments. To what extent do the products of indoor chemistry affect human health? To address this question, the National Institute for Occupational Safety and Health sponsored a workshop titled ""Indoor Chemistry and Health"" on 12-15 July 2004 at the University of California-Santa Cruz. Approximately 70 experts from eight countries participated. Objectives included enhancing communications between researchers in indoor chemistry and health professionals, as well as defining a list of priority research needs related to the topic of the workshop. The ultimate challenges in this emerging field are defining exposures to the products of indoor chemistry and developing an understanding of the links between these exposures and various health outcomes. The workshop was a step toward meeting these challenges. This summary presents the issues discussed at the workshop and the priority research needs identified by the attendees.","","","RefMan","","","","","","","","","",""